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Is there a role for Botswana Government Technical Colleges within a tertiary education and training market?

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**Is there a role for Botswana Government
Technical Colleges within a tertiary
education and training market?**

By

Ian David Morris

**A thesis submitted in fulfilment for the requirements
of a degree of**

DOCTOR OF EDUCATION

UNIVERSITY OF BATH

Department of Education

July 2015

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Signed on behalf of the Faculty of Humanities and Social Sciences, School of
Education

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BAIS	Botswana AIDS Impact Survey
BCET	Botswana College of Engineering Technology
BGCSE	Botswana General Certificate of Secondary Education
BOTA	Botswana Training Authority
BUIST	Botswana University of Science and Technology
BTEP	Botswana Technical Education Programme
CGLI	City and Guilds of London Institute
CITF	Construction Industries Training Fund
DSE	Department of Secondary Education
DSPW	Department of Student Placement and Welfare
DTSM	Department of Teaching Service Management
DTVET	Department of Technical Vocational Education and Training (<i>Post-2009</i>)
DVET	Department of Vocational Education and Training (<i>Prior to 2009</i>)
EME	Electrical and Mechanical Engineering
EU	European Union
GCE	General Certificate of Education
GLS	Grant Loan Scheme
GTCs	Government Technical Colleges
HIV	Human Immunodeficiency Virus
HRDC	Human Resource Development Council
IMF	International Monetary Fund
ICT	Information Communication Technology
JC	Junior Secondary Certificate
JSS	Junior Secondary School
MLHA	Ministry of Labour and Home Affairs
MoE	Ministry of Education (<i>Prior to 2009</i>)
MoEHQ	Ministry of Education Head Quarters
MoESD	Ministry of Education and Skills Development (<i>Post-2009</i>)
MTTC	Madirelo Training and Testing Centre
NCC	National Craft Certificate
NCVQ	National Council for Vocational Qualifications
NGO	Non-Government Organisations
NHRS	National Human Resource Strategy
OMR	Organisation and Management Review
PMS	Performance Management System
PTCs	Parastatal Technical Colleges
PS	Permanent Secretary
PSD	Public Service Departments
SAPs	Structural Adjustment Programme
SSS	Senior Secondary School
TC	Technical College
TEC	Tertiary Education Council
TEF	Tertiary Education Financing
TET	Tertiary Education and Training
TVET	Technical Vocational Education and Training
UK	United Kingdom
UNESCO	United Nations Educational Scientific and Cultural Organisation
VTCs	Vocational Training Centres (<i>Prior to 2000</i>)
WB	World Bank

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Abstract

This thesis explores how, Technical Vocational Education and Training (TVET) is being influenced by the globalising influences of the Tertiary Education and Training (TET) market and the associated national organisational changes in Botswana.

Botswana achieved its independence in 1966 and was once one of the poorest countries in the world. However, since the discovery of diamonds, Botswana has risen into an upper middle-income country with one of the highest investments per GDP in the world in education and training. Government Technical Colleges (GTCs) have been equally supported with heavy investment in modernising, equipping and expanding facilities to the highest first world standards which have virtually doubled the available student capacity since 2000. In 2000, a new full-time qualification, the Botswana Technical Education Programme (BTEP) was launched to enable more young people to access TVET.

Botswana has always been committed to privatisation in the belief that it is more efficient and effective than governmental bureaucracies. For this reason Botswana University and a number of higher education colleges were established as parastatal institutions from their inception. To further liberalise tertiary education and training (TET) and increase opportunities for youth, private universities and colleges were encouraged to establish themselves in Botswana with the attraction of access to the government Grant/Loan Scheme (GLS) in 2007. The GLS pays institutional fees and provides a living allowance grant/loan to students.

GTCs were only recognised as secondary education and training institutions despite offering certificate and diploma qualifications similar to some of the tertiary institutes. This initially widened the academic/vocational divide and excluded GTC students from accessing the GLS and the status that this provided. This situation was exposed in 2007 as BTEP students began to leave GTCs to enrol with the new private tertiary institutions, in a desire to obtain the GLS. Government ministers became concerned, having declared their commitment to operating GTCs at full capacity and so in 2010 included all BTEP students under the GLS.

A number of the existing GTCs are now planned to become tertiary parastatal institutions believing this will enable them to compete more fairly within the educational tertiary market.

The researcher uses an intensive case study methodology to explore the issues and challenges impacting Botswana GTCs at this time of radical educational change.

Within the government ministries, there remains confusion over craft/artisan and technician qualifications. A conflict of interest between various government ministry departments is identified, and this is likely to prevent some of the planned rationalisation to reduce duplication of provision. Implementation of change appears to be much harder to achieve than agreeing the principles of policy reform. The research concludes by exploring what might be done to enable the BTEP qualification to play a greater contributory role in achieving Botswana's vision of an educated and high skill/ knowledge based economy.

Chapter One: Introduction

TVET is recognised internationally as providing a key component in developing the knowledge skills and competence to enable nations to compete in the global economy. Students and their parents however tend to prefer the university academic degree route rather than progressing through apprenticeships and training programmes as they did in the 1960/70s.

Practical trades and skills have not always been attributed with the low status and esteem that they are given almost universally now. 2000 years ago the Greek culture and philosophical thinking of Plato and Aristotle came to influence the surrounding countries proposing an education for rulers, guardians and workers in the ideal state. This placed a higher value on a disinterested theory above applied practical knowledge that was similar to the vocational/academic, technical/liberal discourse (Hyland and Winch, 2007, p. 7). Since that time, world education systems have substantially adopted this Greek thinking, although adapting and developing to what we know today as academic and vocational studies. Brown and Lauder in their book, 'Capitalism and Social Progress', chart the historical record of intelligence and other research, which tended to reinforce this differentiated education system. It resulted in attempts to identify children with academic potential who were enabled to access an extended education, whereas the others were destined for the lower levels of the labour market and to what they termed the factory model (Brown and Lauder, 2001, pp. 68, Fig 5.1).

High IQ	→	Academic Subjects	→	High credentials	→	Professional, managerial jobs
Low IQ	→	Practical subjects	→	Low credentials	→	Semi/unskilled jobs/unemployment

The academic, vocational divide in the English system has continued despite countless policy reviews, legislation and speeches to redress the matter (Hyland and Winch, 2007). It not only emphasised educational divisions, but designated vocational learning as second rate and inferior to general education (Hyland and Winch, 2007, p. 12).

Germany is one country which to some extent counters this opinion, with its highly regarded, high skills apprenticeship scheme (Lewis, 2007, 37:4). It not only reduces youth unemployment but occupies a hugely respected niche in the national psyche

(Wolf, 2002). The 'dual system' as it is known, is an institutional arrangement strongly supported and regulated by the social partners (chambers of commerce, employer associations, unions and the state) which balance practical industrial based training with vocational theoretical training (Wolf, 2002; Lewis, 2007, 37:4). Historically German industry did not accept the corollary of mass production and the de-skilling of the workforce like many other western countries and the USA, but continued to train apprentices to broad based, high skill levels. This involves underpinning the practical with high levels of scientific understanding of the principles of production and processes (Hyland and Winch, 2007). The German system is expensive but develops a highly qualified and skilled workforce in every vocational sector (Wolf, 2002). In Hyland and Winch's, 'A Guide to Vocational Education and Training', (2007, p. 37) a helpful description of the German concept of competence is given, which has three distinct areas; occupational ability; personal competences and social competence. The German 'dual system' is broader based than the English system and about lifelong learning and preparing individuals for changing roles, jobs or occupations within their lifetime. Learning takes place through industrial apprenticeships and vocational schools. The Federal Government constitutes and regulates the apprenticeship training system through the Bundes Institut für Berufsbildung (BIBB) and invests heavily in research and development (Brown, et al. 2001). Strong partnerships with the social partners from each region ensure high standards are maintained. It is a model that many countries have admired and turned to, but does have some critics according to Lewis, (2007, 37:4). Despite these criticisms Lewis suggests that some commentators still hold the German model of capitalism as offering the best promise as a high skills exemplar by citing Green and Sakamoto (2001); and Lloyd and Payne (2005). The dual system is not static but has been changing incrementally, unlike the English TVET system which embraced radical change.

Where skill in Germanic tradition is holistic and is concerned with developing the individual, the English reformed system is suggested as, 'a particular kind of instrumental capability whose enactment is circumscribed by the workplace context' (Lewis, 2007, 37:4, p. 466; Brockmann, Clarke, and Winch, 2008, 34:5). This is perhaps no surprise as the British response to globalisation is suggested as fundamentally neo-liberal (Brown, et al, 2001, p. 222). There are differences within the United kingdom, but it is believed that the English education and training 'outcomes movement' and 'competencies' have spread across the world, touching almost all spheres of education and training (Velde, 1999; Tarrant, 2000; Eynon

and Wall, 2002; Johnson M. 2008). The roots of Competency Based Education and Training (CBET) appear to be traced back to the United States and teacher training in the 1960's according to Silver, (1988); Hyland, (1997) and; SAQA, (2008). Its rise in prominence however started in Britain in the 1980's with the setting up of the National Vocational Qualifications (NVQs) and shortly after the General National Vocational Qualifications (GNVQs) together with a National Qualifications Framework (NQF) (Allais, 2007). The English system follows a crude behaviourist model according to Tarrant, (2000) and is based on Taylorist-Fordist principles breaking knowledge and skills into smaller and smaller parts. It focuses on employer short term needs and low-skills employment rather than meeting the longer term needs of the employee (Brockmann, et al. 2008). Hyland and Winch, strong critics of the NVQ system summarise this as;

'The obsession with narrow, mechanistic and unrealistic conceptions of skill and competences in recent VET reform programmes, can be explained in terms of a mistaken reductionism motivated by the desire to find quick and easy solutions to long-standing and complex problems' (2007, p. 60).

Hyland and Winch continue by highlighting the difficulties in the NVQ 'criterion based' assessments as calling for ever- increasing demands in the specification of content and prescriptive procedures (p. 58). Brockmann et al. sum up the English skills-based approach of the NQF systems as having;

'not only failed to produce the competences and knowledge base needed for an economy based on high and wide levels of operational competence, it has actually actively promoted the production of low-skilled labour' (Brockmann, et al. 2008, p. 556).

In the UK, the reforms used to respond to high unemployment resulted in too many short vocational NVQs, aimed at getting people into work (Wolf, 2002). Not surprisingly, this has added to the view that vocational education and training is for those individuals that have failed school or who were unable to find employment. Although the British, similar to America espouse the commitment to a high skills knowledge society this is rejected by Brown, Green, and Lauder, (2001, p. 239) who show that free market policies are a limited strategy for raising skills levels throughout the economy, citing Crouch, Finegold and Sako (1999). Rather it results in a mixed bag with substantial numbers of low wage, low skilled employment.

Although the NCVQ does not extend to Scotland, the Scottish Qualification Authority (SQA) developed units and learning outcomes that are broadly equivalent to elements of competence (Johnson, 2008). It was the SQA that Botswana turned to when it began developing its technician qualification (BTEP) and as such has some similarities with their full-time vocational qualifications. Previously Botswana had support from Germany in setting up their apprenticeship scheme. Many countries have tried to adapt elements of the 'dual system' with varying success but borrowing policies from other countries are often problematic (Wolf, 2002, p. 71) and is unlikely to be applied in the same manner due to national cultural and contextual factors (Hofstede, 2003). It was in 1987 that Botswana with substantial support from Germany introduced a type of the dual system apprenticeship scheme attempting to balance industrial training with a period in GTCs for the theoretical component. Unfortunately in contrast to Germany, Botswana had only a tiny industrial base, but thousands of young people who were desperate to gain further training following Junior Secondary School (JSS). There were no other alternatives for young people at that time as Senior Secondary School (SSS) places were limited and virtually no employment opportunities were available to young people with such a basic education. The apprenticeship scheme was, therefore adapted to increase access, but quickly became compromised with many 'apprentices' having little or no employment resulting in the very limited industrial training experience. The apprenticeship scheme is coordinated through the Ministry of Labour and Home Affairs (MLHA). There are no social partner arrangements as in Germany to maintain quality standards. The theory component of the apprenticeship programme, the National Craft Certificate (NCC) is taught in GTCs under the Ministry of Education (MoE). In 1999 the Department of Vocational Education and Training (DVET) under the MoE were requested to develop a new TVET qualification, that could be accessed by JSS and SSS leavers who were unable to progress to one of the recognised tertiary institutions or employment. DVET identified that the key shortage in Botswana was for technicians in business and industry, where many posts were taken by expatriates. They turned to the UK for assistance and after visiting all the main qualification bodies they finally selected the Scottish Qualification Authority (SQA) as appropriate partners to develop a unitised outcome based technician qualification (BTEP).

The key difference between the two Botswana TVET qualifications described here is that the apprenticeship, National Craft Certificate (NCC) is an artisan qualification

and the BTEP is a technician qualification. There is much confusion over this as will be seen later from the research.

The Government of Botswana is committed to liberal policies and privatisation in the belief that this is more efficient and less bureaucratic than state managed activities. Historically, state TET institutions had been given some autonomy to manage and appoint staff in what they called, 'parastatal organisations.' However, GTCs were never seen as part of TET and therefore remained under the responsibility of the DVET under the MoE. In 2008 DVET was renamed Department of Technical and Vocational Education and Training (DTVET) and in 2009, the MoE became the Ministry of Education and Skills Development (MoESD) in anticipation of their proposed future role and responsibilities to include all education and training. The apprenticeship scheme/NCC during this research is under the Ministry of Labour and Home Affairs (MLHA).

The Botswana government has been very generous in supporting the funding of tertiary student fees and student grants for many years. In 2007 for the first time they opened up TET to private providers, in a desire to increase tertiary student numbers. As a result, students accessing their programmes were also eligible to access the Government Grant Loan Scheme (GLS). The GLS provides institutional fees and a generous student living allowance by Sub-Saharan Standards. The result was a significant proliferation and growth of private sector institutions in Botswana urban centres, but in particular within the capital of Gaborone. One result of this TET liberalisation was that students began to leave GTCs to these new institutions where there was the attraction of accessing the GLS. To access the GLS, students require sufficient points accrued from achievement in their Botswana General Certificate in Secondary Education (BGCSE) examinations. Not all GTC students had sufficient points to qualify for the GLS, but it had the effect of depleting numbers of those with higher qualifications.

The challenge for GTCs is how to contribute towards the Botswana planned high skills, knowledge economy while achieving full utilisation of their expanded physical resources within the re-forming liberalised competitive tertiary market.

In this introduction I have shown how TVET and vocational skills are recognised by many as being low status qualifications and for the less able and those who have not achieved in secondary education. I have also described the English and German systems of vocational education and training as they have both contributed towards the system in Botswana. I conclude by briefly describing the situation in Botswana

and how they embarked on a tertiary education and training market in 2007 which has proved challenging for GTCs as they were initially only considered to be providing secondary education qualifications. For this reason I have described the difference between craft/artisan and technician qualifications.

The Role of the Researcher

My career provides I believe, a practitioner understanding as well as a theoretical grasp of TVET. On leaving school I was apprenticed to engineering and studied at a college part time and then progressed to higher qualifications whilst working in the industry prior to lecturing in UK technical colleges. I taught classes from artisan/craft to higher national diploma technician levels, eventually becoming head of a large engineering department. I then took further cross college senior management roles during a period of rapid educational change in the UK. During this time, I was able to observe and work on national and European TVET projects which saw many reforms. In the UK these included the piloting of early competence based qualifications, and other, projects under the NCVQ. I was also able as a senior manager to experience the benefits and challenges of the English liberalisation of TVET. Technical college 'incorporation' did provide greater institutional autonomy but with increasing budget reductions which led subsequently to the 'high cost' staff rationalisation. This practical experience proved invaluable as I embarked on an international consultancy career.

In Botswana, I was appointed a coordinator of a European Union funded project in 2000 to support the opening of a new GTC which became the first institution to launch the BTEP qualification. Following the successful project conclusion, the Botswana government appointed me as a senior adviser to DVET and GTC Principals until March 2008 when I left to continue consultancy in other countries.

I support the belief, that in the 'knowledge society' vocational skills and competences are just as important as academic skills and competences (European Ministers for VET, the Social Partners and the European Commission, 2010). For this reason, it is important that TVET can perform its crucial role in any tertiary education system being a component of post-secondary education. Perceptions on TVET are changing with the industry becoming more technologically based and is recognised by UNESCO as an entry point to the 'Knowledge Society' (Hughes, 2005).

Context of the Enquiry

The questions asked in this research explore how GTCs are responding to the organisational changes resulting from a marketization of TET in Botswana. To do this I use the BTEP qualification as a case study to investigate the following questions;

What impact has the tertiary education and the training market, and its related organisational change had on Botswana government technical colleges and in particular on the Botswana Technical Education Programme qualification?

How can the Botswana government technical colleges contribute proportionately and competitively within this new tertiary educational market?

Question 1 explores the impact that the introduction of a tertiary education and training market has had on GTCs and in particular on their BTEP student delivery. This is done by exploring the reforms and institutional changes which have accompanied and are associated with the introduction of a competitive TET market. It describes how GTCs have been perhaps been mistakenly disadvantaged and marginalised by considering them initially to be providing only secondary education and training levels.

Question 2 will enquire as to what needs to be further done to create greater fairness and equity within Botswana's new competitive TET market if GTC TVET programmes are to be included. It is fully recognised that GTCs are not expected to compete in offering qualifications at degree level and above, but they do have a significant role to play in providing TVET education and training both full time and part time at technician and craft levels to meet the needs of industry and business. It also recognises the need for individuals to update and upgrade their qualifications throughout their working life.

By seeking answers to these questions, it should provide a case study which describes Botswana's TVET situation, particularly related to the TVET qualifications. From this, I propose to investigate how GTCs have been impacted by the new TET market and then what needs to be considered to enable GTCs and their vocational qualifications to contribute positively to Botswana's vision of developing a 'knowledge society'. I will also suggest areas for further research and factors which need to be considered by other countries undertaking similar reforms.

The reason for selecting Botswana for the basis of this case study research is that:

- Botswana since its independence in 1966 is internationally recognised as a progressive, stable and an upper middle income Sub-Saharan African country. With high education participation rates at primary and increasingly secondary level, they are now determined to increase the current 11.4% tertiary enrolment to the minimum(s) of 17% by 2016 and 25% by 2026. To achieve this target, the government has invested substantially in infrastructure and staff development at the university, higher institutes and within the TVET sector. Botswana in recognition that the government could not achieve these targets alone began to sponsor students in private tertiary institutions in 2007. The national policy, 'Towards a Knowledge Society' (Republic of Botswana, 2008) together with, 'Realising our Potentials' (Ministry of Education and Skills Development, 2009) a National Human Resource Development Strategy, detail the planned radical reform of TET which embraces higher education and TVET.
- Although funding agencies (World Bank, 1988) (World Bank, 2007) advocate that developing countries should open up their country systems to market forces as a way of expanding education and training, there appear to be few intensive case studies considering the impact of this process on TVET. This Botswana case study may provide a more detailed study of the issues and challenges that need considering when implementing a TET market and the role of TVET qualifications within this.

Outline of the Thesis

This research contains seven chapters.

Chapter 1 presents the background to the research including an introduction to the English and German vocational systems which contributed to the Botswana system, the role of the researcher, the context of the research together with the research questions and their justification.

Chapter 2 provides a discussion on the impact of globalisation on education and training, and the growth of liberal policies applied in England, which became a test bed for many countries and which have clearly influenced Botswana's education and training system.

Chapter 3 provides an introduction to the country of Botswana and the context of the case study covers the policies, socioeconomic environment, educational finance and expenditure together with a profile of the key education and training organising authorities and qualifications within the government TVET sector.

Chapter 4 is a literature review which considers the impact of liberalism and the varieties of capitalism. I then look at skill formation systems and the role of TVET in Botswana and conclude by reviewing key documents related to the case study which provide relevant information and previous related research.

Chapter 5 presents the research qualitative and quantitative methodology together with the data collection techniques and analysis. I also present my ethical stance and actions taken to achieve the research validity and reliability.

Chapter 6 presents the research findings

Chapter 7 provides a discussion on the research findings and outcomes.

Chapter 8 is the conclusion together with suggested areas for further enquiry.

Chapter Two: The Globalisation of Education and Training

In this section I show the significance and rise of education and training within the global context and the importance that governments now place on high skills, knowledge development but within increasingly reformed, neo-liberal market orientated systems.

Stephen Ball suggests that,

‘education is itself now in almost permanent ‘crisis’ as it has taken centre stage in the complex relations between state and the ‘imagined economy’ – a knowledge economy much simpler than the real one’ (Ball, 2007, p. 5)

Although it is difficult to predict future education and training requirements, any new developments should increase mobility of labour and ensure a well informed and qualified workforce (McGinty & Fish, 1993, p. 114). This was in recognition that the industry was changing more rapidly than ever before in technologies and new patterns of trade influence. Businesses were no longer confined to historical locations or national borders and had begun to move anywhere in the world where the most favourable conditions were available, be that with government incentives, or for raw materials, a high skills labour force, low labour costs, or closer to the market where the goods or services are to be sold. The quality of a nation’s education and training system was seen to hold the key to economic prosperity (Brown & Lauder, 1997) and the importance of developing an educated nation with high skills to compete in the increasingly global market is also recognised by many (Lauder and Hughes, 1999; Brown et al. 2001; Olssen et al. 2004; World Bank, 2007).

Education develops the productivity of skilled labour and arguably is increasingly the most significant factor in economic productivity and competitiveness (Moore, 2004, p. 34). Moore suggests that investing in education as human capital is the best way of improving economic performance. This is particularly relevant, but more challenging for developing countries who normally have limited budgets and small economies, but who also desire to increase their share of the world’s market prosperity and thereby improve the opportunities and quality of life for their own populations. This is the main reason the World Bank (WB) and International Monetary Fund (IMF) have been prepared to support developing nations invest in

their education systems, but often with conditionality, such as the adoption of neo-liberal policies (World Bank, 1988; Jones, 1997; Samoff, 1999; Heyneman, 2003).

Alison Wolf (2002) in her challenging book, 'Does Education Matter?' sums up national beliefs that education is the main constituent of economic success;

'Increasingly they sign up for the same package: free trade, market economics, the virtues of entrepreneurship and education, education, education' (p. xi)

Wolf argues that, unfortunately, this blind belief in the economic benefits of education has resulted in huge amounts of wasteful government spending, attached to misguided and even pernicious policies (Wolf, 2002, p. xi). Wolf further suggests that education, for many governments, appears to have become the precondition for economic success, and terminology such as globalisation, competitive advantage, knowledge generation, creativity, innovation, lifelong learning and flexibility can now be found in most national policies and strategies. This is perhaps not surprising as governments increasingly need to satisfy populations that want to see living conditions improving, and education and training is considered a way to achieve this, by providing access to high value paid employment.

Unsurprisingly more young people than ever before worldwide are accessing education (UNESCO Institute for Statistics, 2011). From 1999 to 2009 in Sub-Saharan Africa, access to primary education increased by 59% (UNESCO Institute for Statistics, 2011). This is a positive development providing that governments also recognise that education needs to be inclusive and progressive to internationally high standards. Just focusing on a university elite could prove detrimental to national developments as new ideas and innovation are not just the preserve of a few, but are generated from all sectors and across all populations according to Sala-i-Martin, (2011).

Comparatively, Western Europe has over one-third of the senior secondary age group accessing academic routes into higher education but traditional vocational schools are in headline decline (Wolf, 2002, p. 174). Canada was one of the first countries to achieve 50% of young people to enter the jobs market with a college education, closely followed by Japan and South Korea (Brown et al. 2011) which appears to have provided a target for other nations to follow.

Technical and Vocational Education and Training

Significantly despite often united political opinion, and repeated governmental commitment from many nations over the years to establish parity of esteem between vocational and academic qualifications, students and their parents have demonstrated an insatiable desire and in increasing numbers, to access the university sector (Wolf, 2002, p. 56 & 57). This is despite employment shortages in many countries for artisan and technician jobs (Siphambe et al. 2009). It is, therefore, not surprising that many TVET systems are currently not preparing sufficient people with the right skills to meet labour market demands (Atchoarena and Delluc, 2002, p. 15). How to encourage more young people of all abilities leaving secondary education to follow TVET sub-degree qualifications has been increasingly challenging governments around the world, particularly as a majority of young people and their parents appear unconvinced by arguments of parity of esteem (Wolf, 2002). Not surprisingly, the recognition that a university education leads to higher status, greater earning power and job prospects is also impacting on developing countries as well as first world countries and generally, vocational pathways are perceived by the majority, as for low school achievers and young people who have generally failed through the more academic pathways of secondary schools (McGinty and Fish, 1993; Obok-Opok et al. 1997; Hyland and Winch, 2007; World Bank, 2007; Grethen, 2010).

Making VET systems more open, flexible and attractive has for some time been identified as a priority and a major part of the European economic, employment and social agenda (Lasonen and Gordon, 2008, p. 7). Europe, in recognising TVET's valuable role and importance at all educational levels, consider that parity of esteem and links between education sectors needs to be fostered by innovative strategies and instruments at the national and European levels (Lasonen et al., 2008, p. 8). Unsurprisingly given the breadth and cultural differences within the EU there are no common solutions; just recommendations that this should include designing TVET systems which attract more students to higher qualifications which it is assumed will contribute to innovation and competitiveness (Lasonen et al. 2008, p. 23). Specifically in the knowledge society, vocational skills and competences are recognised as important as academic skills and competences (Training, 2010).

Some believe that educational markets will resolve the issue as business and industry become overloaded with graduates and employers look for alternative employees who better fit their recruitment profile. A study into student completion and employment which compares American occupational certificates, associate

degrees and bachelor degrees, suggests that more time spent studying or training does not necessarily bring higher earnings (Wheary and Orozco, 2010). A large portion of the difference in earnings is attributed to the type of qualifications held. Specifically, vocational qualifications and vocationally related degrees earn significantly more than those students taking humanities, social science and non-specific qualifications. In particular certificate qualifications in engineering were seen to earn the equivalence or more than those achieving bachelor degrees in non-vocational areas (Wheary et al. 2010, p. 3). America is however recognised as a first world country, but for many countries that are still developing and have only small industrial and business sectors, then high qualifications are often a necessity for young people to gain an interview and even the most basic employment when unemployment levels are high.

To compete in the increasingly interconnected global market, developing country governments and in particular Sub-Saharan Africa countries have been continually encouraged to establish neoliberal policies within the education sector by the WB through privatisation and parental contributions through the raising of school fees. The WB has received considerable criticism on the conditions placed on their loans and in particular the requirements to raise educational fees, which has exacerbated the division between rich and poor (Heyneman, 2003).

In this chapter I have shown the importance of education and training for countries competing within the global economy. As the percentages of young people taking tertiary education and training increases so the employment opportunities become more competitive. There have been many political statements to establish parity of esteem between academic and vocational qualifications but all appear to have achieved very little. Generally students and their parents still prefer the university route, which is perceived has given higher status and assumed higher earning potential for those graduating. However with increasingly numbers of graduates unable to find appropriate employment the type of degree and the benefits of sub degree vocational qualifications that meet the needs of business and employers may bring about a reappraisal of the perception and value of TVET qualifications. This might particularly result if they are seen to lead to higher employment opportunities with encouraging remuneration and good job progression prospects.

Chapter Three: Introduction to Botswana

Political Background

Botswana adopted a liberal democratic system of government at independence which is described as the introduction of multipartyism, freedom of speech and association and the protection of individual rights and property (Mfundisi, 1998, p. 162) (Stenbäck, et al., 2000). Contrastingly, van Rensburg (2001) suggests that Botswana is a deeply conservative and hierarchical society, which has resulted from almost a century of imperial British rule and its traditional chieftainship rule.

Unlike many African countries Botswana has performed economically well, such that the country has never been subjected to the WB/IMF–Structural Adjustment Programmes (Narayana et al. 2005).

In NDP8 (Republic of Botswana, 1998), there was recognition of the need to downsize the government, which resulted in a public sector reform programme. This included changes in public procurement, cost controls, cost recovery, reductions in the civil service staffing, increased productivity, privatisation and improvement of implementation capacity of the government (Stenbäck et al. 2000). The policy shift in NDP8 is attributed to the fact that in Botswana's early independent years, the private sector was insufficiently developed to carry out any significant functions.

NDP9 (p.69) takes the commitments of NDP8 further with the introduction of Performance Management Systems (PMS) and privatisation aimed at increasing the role of the private sector in the economy. The privatisation policy of 2000 (Mogotsi, 2005) encompasses corporatisation, management contracts, leases, as well as partial or full transfer of ownership to the private sector (Republic of Botswana, 2003, p. 4.37). The first master privatisation plan was approved in 2005 with the purpose to provide a framework for increasing the role of the private sector in the economy. It identified public enterprises that would be privatised through different forms of privatisation namely; divestiture, restructuring and contracting out, commercialisation, executive agencies, and public-private partnerships. The aim of privatisation was to increase the efficiency of the public infrastructure by effectively increasing the private sector involvement (Republic of Botswana, 2005).

Botswana's Economic Position

On the Global Competitive index 2012-2013, Botswana is encouragingly ranked 79 with only South Africa and Mauritius higher on 52 and 54 respectively in the Sub-Saharan Africa region (World Economic Forum, 2012). Among the country's strengths are its relatively reliable and transparent institutions (33rd), with efficient

government spending, strong public trust in politicians, and low levels of corruption. The most problematic factors for doing business were cited as, a poor work ethic in national labour force, access to financing, inadequately educated workforce and inefficient government bureaucracy (World Economic Forum, 2012, p. 114).

Although Botswana growth is impressive, income inequality remains high. Poverty in Botswana did decline from about 59% in 1985/86 to 30% in 2002/2003 with the worst poverty concentrated in the countries remote areas where a high degree of dependence on government welfare exists. However using the poverty 'one dollar per day factor' in 1993/94 it was 19.9% and rose to 23.4% in 2002/03 (Botswana Central Statistics Office, 2009) indicating that the poor although declining are getting poorer.

The most challenging obstacle facing Botswana in its efforts to improve its competitiveness remains its health situation. In 2008 Botswana AIDS Impact Survey (BAIS) estimated that 17.6% of the population aged 18 months and above was HIV positive in that year (National AIDS Coordinating Agency, 2010). The HIV/AIDS pandemic has forced national budgets to be adjusted in order to accommodate the challenges which it brought, however efforts are beginning to pay off as infection rates are starting to decline in certain age groups (Botshelo, 2007).

Vision 2016 (Republic of Botswana, 1996, p. 27) gives a long-term framework for Botswana's development. It recognises that the world is shrinking and changing as the revolution in communications technology brings people together into a global market and an increasingly intrusive global culture. Vision 2016 states that Botswana must provide for and respond in proactive ways to these global changes, by a strong focus on education and training, which has been reflected in NDPs 7, 8, 9 and 10, demonstrating commitment to both policy and budgetary allocations.

Employment opportunities

In Botswana's National Human Resource Strategy (Ministry of Education and Skills Development, 2009, p. 4) it states the commitment of their vision statement to ensure that by 2022;

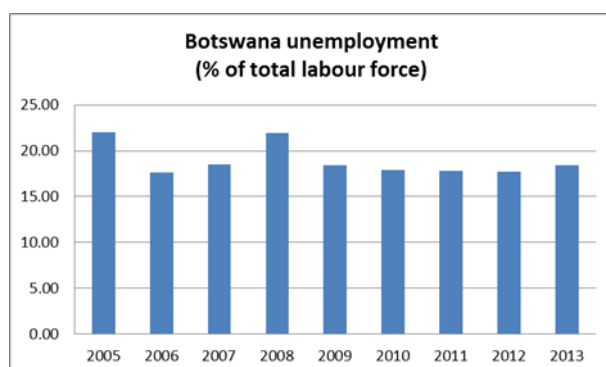
'It will be universally accepted that the quality, productivity and motivation of its people will be Botswana's single greatest and valuable resource'.

In this HR strategy document (2009) it states clearly that the country needs to move beyond the commodity based economy (Minerals and tourism) to one that is more secure and sustainable which would pull an increasingly proportion of the potential workforce not just into the labour force but into employment in high value jobs. This

has resulted from an examination of Asian and China's achievements which has concluded that Botswana cannot compete with low skilled low cost manufacturing economies due to the rising social and economic aspirations amongst Botswana due their own improving economy to upper middle income status. From studying exemplars such as South Korea, Singapore, Finland, Sweden, Denmark, Austria, Netherlands, Ireland Australia, New Zealand and Mauritius; Botswana have concluded that these countries success has been underpinned by a combination of quality educational systems and high quality jobs and that fundamentally skilled workers create jobs (Ministry of Education and Skills Development, 2009, p. 11). In particular the HR strategy document cites Scandinavian countries who have developed from a foundation of natural resource leverage into a high-skills economy. Botswana believes that to achieve similarly will require a focus on:

1. Economic incentives and institutional regime;
2. Research and innovation;
3. Information and communications technology;
4. Human resource development

In the 1964 the Botswana census of the population indicated that 250,000, (90%) were engaged in agricultural activities and only 29,000 were in salaried occupations most of which were within the government sector (Ministry of Education and Skills Development, 2009). By the 2001 census the agricultural sector had fallen dramatically to 9% (48, 0000) and by 2008 the formal sector had risen to 47.2% of which the fastest growing sectors were finance, business services, manufacturing, trade transport, communications. Comparably education levels had also risen during this period but still have some way to go before all students would reach senior secondary school level as shown later. Unfortunately as the numbers of citizens in agriculture have fallen, the economy has not grown sufficiently to provide employment which is acute among the youth (12-24 age range) (Ministry of Education and Skills Development, 2009). Thus unemployment has increased from



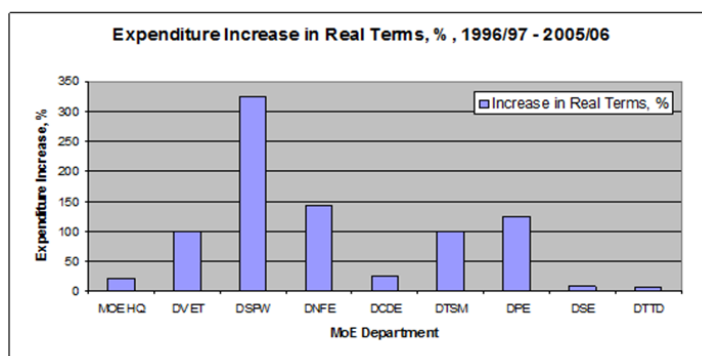
Graph 1: Botswana Unemployment. (World Bank, 2015)

1991 at 14% rising to 24% in 2002/3. Perhaps more concerning was that as education levels had been increasing, university graduates for the first time were joining the ranks of job seekers (Ministry of Education and Skills Development, 2009). More recent figures (Graph 1) indicate that apart from 2008 during the world financial crisis, unemployment has remained relatively unchanged at just below 20%. Of the unemployed 26% had completed primary education, 35% JSS education and 22% SSS education. 86% of the unemployed had received no further training. Unemployment is highest (35%) of the 20-24 age range (Botswana Central Statistics Office, 2009). The IMF suggests that reducing unemployment in Botswana requires, adopting prudent public employment policies and aligning the curricula for university and tertiary education, and vocational training to meet the demand for skilled labour in the economy to reduce the skill mismatch (International Monetary Fund, 2012, p. 3). Like many developing countries Botswana does have only limited labour market information which does make it challenging matching education and training against industry and business needs and also predicted areas for growth. This has made it challenging when developing the BTEP qualification as often those developing the qualifications have no detailed national labour market information base to turn to having to rely on industry surveys and surveys of the job market in national and local newspapers. This will no doubt improve in the future as it is essential for planning and projecting labour market trends and shortages.

Education Investment

Botswana appears to have paid little attention to the rising cost of education during 1960's to 1991 (NDP's 1 to 6) where the priority was in developing infrastructure and expanding educational provision at primary, secondary and tertiary levels. However, caution was raised by the need for cost efficiency and to improving the student staff ratio in the NDP 6 (Republic of Botswana, 1986, p. 6.98). School fees which had been in place in the early years of independence were finally abolished in 1989 in secondary education, leaving only the tertiary sector (*this did not include technical colleges at that time*) where students were expected to contribute 5% of their salary in relation to the number of years that the tertiary training had taken (Republic of Botswana, 1991, p. 334). NDP8 reports that expenditure, particularly at secondary level rose beyond the ceiling set due to the implementation of the Revised National Policy on Education, (Republic of Botswana, 1994) which had recommended the expansion of secondary, tertiary, including technical and vocational training. NDP8 as a result, highlighted the need to explore methods for cost sharing and cost recovery in future education provision (Republic of Botswana, 1998, p. 15.18).

The policy justification for introducing cost sharing in Botswana's education system is fully explored in NDP9 (2003 to 2009) where it suggests that the large educational



Graph 2: Botswana Educational Expenditure. (Cardno Agrisystems Ltd/Cardno ACIL, 2006, p. 34)

budgets (20% +) cannot be sustained in the longer term, unless alternative avenues for complementing government efforts can be found. It suggests that the spirit of self-reliance needs to be revived for parents and other stakeholders to complement government efforts. Interestingly NDP9 claims that, free education had encouraged undesirable behaviour in some students who appear oblivious of the huge investments that the government has made in their education (Republic of Botswana, 2003, p. 15.57). NDP9 justifies its stance on cost sharing by noting the growing number of fee-paying private schools/colleges in which many parents have enrolled their children. It is suggested that this demonstrates willingness by parents and students to pay for high-quality education and training. The fee structure was not excessive¹ considering the benefits, but many parents were reluctant to pay initially in the belief that they would not be penalised financially. By 2007/8 the MoE estimated that year on year expenditures (Graph 2) had grown by 84.3% in real terms which was mostly spread across, the Department of Teaching Service Management (DTSM), the Department of Student Placement and Welfare (DSPW), the Department of Ministry Management Head Quarters (MoEHQ) which includes the University of Botswana and Department of Secondary Education (DSE). The greatest increase in recurrent expenditure was for DSPW that increased by 324.3% (Cardno Agrisystems Limited ACIL Pty, 2007, p. 33). The DSPW manages the government student Grant/Loan Scheme (GLS), the expenditure of which was to rise significantly higher in 2007 and beyond budget once it became available for students enrolling in private sector tertiary institutes. In 2004, 26,943 students were sponsored under the GLS for TET of which 17,932 students were attending Botswana institutions and 9,011 being sponsored for training in other countries. One hundred private tertiary institutions had registered with the Ministry of Education by

¹ P500 for secondary and P750 for TVET per annum

2004, and this number increased rapidly at the beginning of 2007, with the incentive of inclusion within the GLS. The GLS was designed as a cost recovery method to increase recipients' contributions and to earmark increased financial support for areas of critical manpower shortage. The scheme was intended to apply to all students pursuing post-BGCSE and training in public, parastatal² and private tertiary institutions. To ensure the effective and efficient management of the GLS, it was proposed that a Bursaries Department³ be set in place to establish;

- effective mechanisms for borrowers to make repayments
- efficient record keeping by the respective collection agencies
- systems to pursue loan defaulters
- widespread publicity

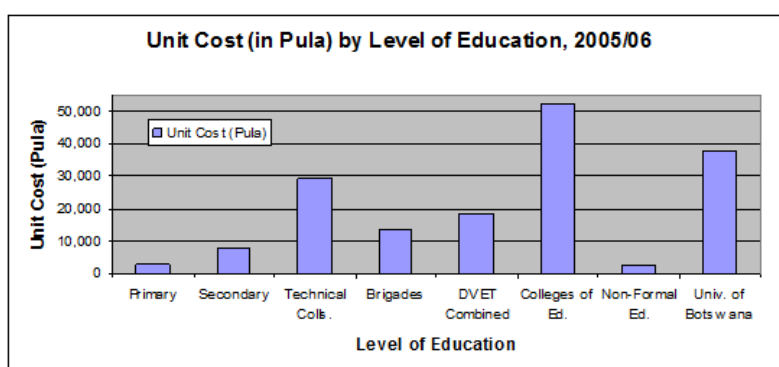
The GLS was managed by the Department of Student Placement and Welfare (DSPW) renamed Tertiary Finance under the MoESD, where five categories from 1 to 5 are classified from high to low national priority. Category 1 attracted 100% grant on both tuition and maintenance, and no repayment required except for a period of service in Botswana. Category 5 at the other end of the scale provides 100% loan for tuition and maintenance which require repayment over a specified period. Unfortunately, the GLS scheme had always reported problems in tracking graduates and ensuring that they repaid loans back to the government (Republic of Botswana, 1986, p. 14.75). This is raised in NDP8 (Republic of Botswana, 1998, p. 15.153) where it is indicated that mechanisms should be put in place for a more effective debt recovery system, to address the persistent problem of graduate defaulters.

The debt collection mechanisms proved ineffective, as shown by Botswana newspapers at the time, one of which carried the headlines; 'Primary school pupils are paying for government's inefficiency' (Sunday Standard Reporter, 2006). The paper suggested that if the MoE could get its act together and recover at least 10% every year from the close to one billion Pula outstanding in student loans, it would have enough money to defer the introduction of school fees in primary education by at least 10 years. Although perhaps exaggerated, the report did bring to the surface a situation that had been going on for years, and that had become accepted custom and practice. I will return to look at the GLS later as it has a direct impact on GTCs recruitment and retention. One of the reasons for widening the availability of TET in Botswana was to reduce the high costs of sending students overseas. Since

² Parastatal is an institution or organisation which is funded by government but is given independence to manage its own affairs.

³ Later called Tertiary Education Financing (Int4)

independence, expenditures systems and organisations had understandably grown exponentially to meet the required national needs, but perhaps insufficient attention had been given to planning ahead for when the civil service HR capacity was achieved. By 2005 Botswana had trained sufficient teachers to replace all the existing expatriate staff giving rise to increased unemployed for newly qualified teachers, representing a significant waste of resources (Cardno Agrisystems Limited ACIL Pty, 2007, p. 5). The financial review also revealed that the cost per student of training teachers was at a level far above every other area of education (Graph 3). This presented a major challenge for the government on how to reduce costs whilst expanding TET to meet previously agreed targets. GTC cost per student can be seen to be just less than 30,000 Pula per full-time student. Technical training is expensive due to the equipment and material costs and often the need to teach in small groups due to health and safety considerations.



Graph 3: Unit Cost of Education (Cardno Agrisystems Limited ACIL Pty, 2007, p. 40: Chart 2.3)

Student in tertiary education are shown to have risen from 20,011 in 2003/4 to 31,129 in 2007/8 due to the expansion in private providers (Tertiary Education Council, 2008). This figure will increase substantially as it only accounts for first year students in the new private institutes. Where student are following a degree programme of five years then new students will be recruit for the next four years until the first year students graduate.

In this section I have outlined Botswana's political stance and economic performance in and that the significant national weakness identified are, poor work ethic, inadequately educated work force and an inefficient government bureaucracy, hence the desire to privatise where possible and reduce education and training costs. Botswana believes that an educated and skilled workforce creates jobs,

something they are committed to with the relatively high unemployment rates that are shown here.

Botswana Educational and Training Profile

In this section, I provide a brief historical description of the education and training of Botswana and the key qualifications and providers within the TVET sector. This is to set the TVET BTEP qualification within context.

Pre-independence in 1966, under the British, there was little to no formal education opportunities available save for a few missionary schools. At independence Botswana was believed to have 40 Batswana, who were university graduates and 100 with senior secondary certificates (Botswana Evaluation Services Team, 2009, p. 77). It, therefore, became a priority to educate and train citizens to take on the new roles of government and the civil service. The current education system is now

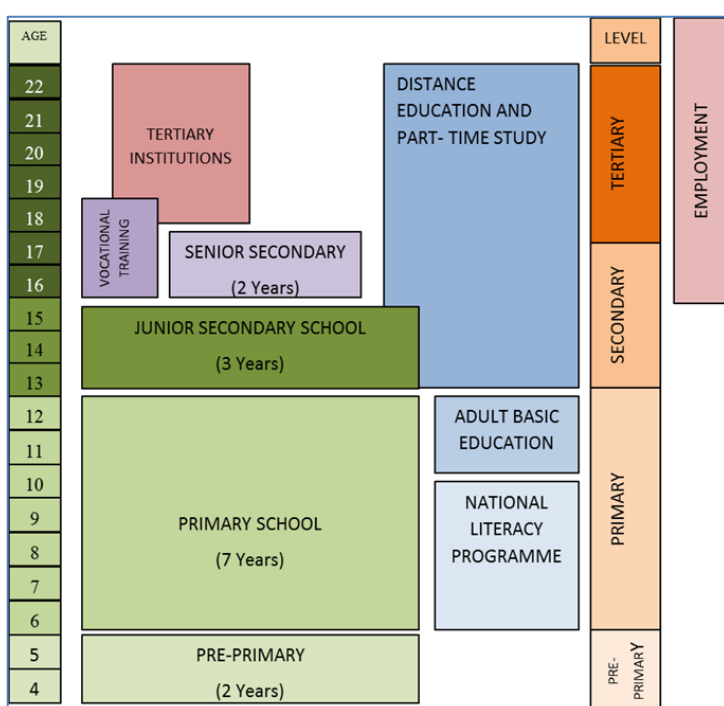


Figure 1: Botswana Education Structure. (UNESCO Institute for Statistics, 2010/11)

as shown in Figure 1. Pre-primary education grew rapidly from 1996 and is run by private individuals, non-government organisations (NGOs) and village district councils (Stenbäck, et al. 2000). In NDP8 the top priorities for primary education were addressing the lack of classrooms, teachers' quarters, teacher training, and curriculum development. The Ministry of Education (MoE) at that time focused on improving access and equity for primary aged children, to enable the country to meet the millennium targets and to reduce class sizes. Following the seven years of primary school, a three-year junior secondary certificate (JC) increasingly became available for all. The senior secondary school curriculum was based on the British, 'Cambridge Schools Certificate' and success in these examinations provides entry

to tertiary education. A University degree takes five years. The 'Cambridge' examinations eventually matured and became the Botswana General Certificate of Secondary Education (BGCSE) once expertise had been fully developed in the country. For those students only completing the JC or not passing the BGCSE examinations sufficiently to gain access to higher education, they had little opportunities for further education, training or employment.

More recently transition rates from junior to senior secondary school have improved to 66.0% (2008) as a result of introducing a double shift system at senior secondary schools, while they await the completion of expanded facilities (Republic of Botswana, 2009). The target set for year 7 in NDP10 (2016) is proposed at 100% (Overeem, 2010) by which time all young people should be able to complete senior secondary and sit their BGCSE examinations.

Community Brigades

Pre-independence there had been limited TVET in Botswana. However in the early 1960's Patrick van Rensburg began setting up what came to be called 'Brigades', where the concept of 'education through production' was introduced. However by the time Botswana revenues began to expand from the diamond sales in the early 1980's, Rensburg's influence on the schools sector to include 'education with production' began to be side-lined by a more traditional approach to business and social studies (van Rensburg 2001, p. 128). This was probably due to the importation of the British Cambridge General Certificate (GCE) syllabus and examination system at that time. Brigades provided a valuable contribution to increasing skills, particularly in rural and remote regions. Although Brigades were originally intended to be community funded through income generation from local production activities, they had for a number of years received increased government funding through the MoE via the Department of Vocational Education and Training (DVET). This government funding paid for Brigade coordinator salaries, and additionally Brigades were paid per student enrolled. This together with significant capital injections for equipment to Brigades was argued by a review, that it would not lead to significant Ministry budgetary increases if they were taken over and absorbed into the government TVET sector (FAS International Consulting Ltd, 2001). Extensive consultation with key stakeholders by the MoE from 2002 to 2004 on the way forward, gave widespread agreement on the earlier report findings and recommendations and subsequently, cabinet approval was given in 2007 to take-over Brigades and convert them into government community colleges within the

TVET sector. The responsibility for taking over the Brigades was given to DVET, which took up significant time and resources with the limited staff available.

The Botswana Apprenticeship Scheme (NCC)

In 1987, Botswana, with substantial support from Germany, introduced a form of 'dual system' apprenticeship scheme, attempting to balance employer-based industrial training with a block release period in technical colleges⁴ for the theoretical component. The programme is managed under the Ministry of Labour and Home Affairs (MLHA) through the Maderio Training and Testing Centre (MTTC), who are responsible for managing student registration, monitoring the workplaces and providing log books to apprentices. MTTC is also responsible for skill testing and the setting of the National Craft Certificate (NCC) examinations which apprentices take

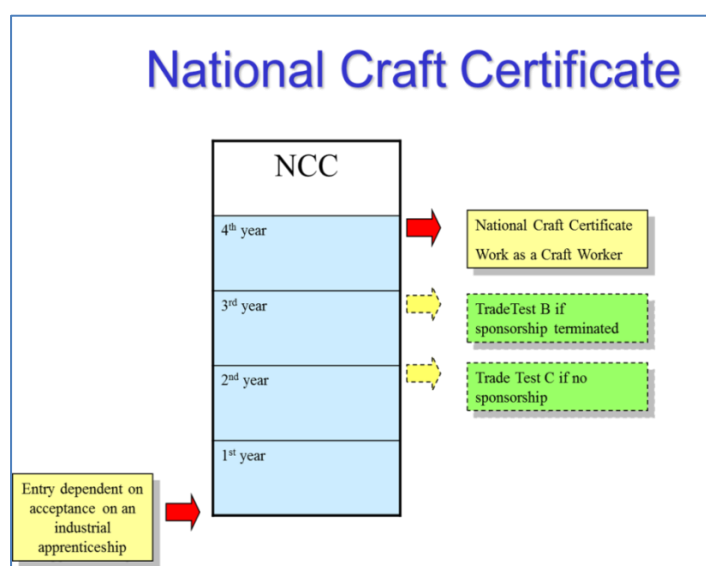


Figure 2: National Craft Certificate Qualification. (DVET, BTEP Stakeholder Conference. 2007, Morris)

(Figure 2). The theoretical component of the NCC qualification is delivered largely through the GTCs managed by DTVET. The first Botswana GTCs were built in 1987, with support from Germany and located in key centres around the country. Apprentices attend GTCs for one term (*13/14 weeks*) per year for four years from which they graduate as a qualified craft/artisan, provided they pass the final theoretical and practical examinations (*40/50% pass mark*). There were reported moves to raise the pass mark to improve the quality standards. Lecturers from GTCs were financially contracted to write and mark the NCC. The scheme which proved successful in Germany commenced well in Botswana with the expatriate technical support, new buildings and equipment and learning materials but unfortunately with Botswana's very limited industrial base compared with that of Germany, it resulted in insufficient apprenticeships being available for the school leaving population, who were unable to progress to the limited vocational qualifications opportunities at that time. The result was a compromise, achieved by

⁴ Technical Colleges called Vocational Training Centres (VTCs) prior to 2000.

enabling students with no sponsorship to take the NCC to levels 'C' and 'B' which were basically the theoretical component of the apprenticeship programme (Figure 2).

Where students were taken on by a Brigade then, it was hoped that they would gain practical experience from the community production activities, and that would also subsidise the training costs. Regrettably as the comprehensive evaluation indicated, most Brigades failed in this regard (FAS International Consulting Ltd, 2001, p. 19). Apprenticeships with the large national and international companies (parastatal utilities and mining companies) have been more successful, although many run the scheme in their company training facilities and cover both the theoretical and practical components. The GTCs, which had been designed to provide only the theoretical component, were requested to provide more practical experience for the non-attached apprentices to compensate for the lack of industrial placement, but this was never sufficient due to time constraints and lack of practical industrial experience of lecturing staff. Criticisms of the scheme often fell to the GTCs who provided the public face of the apprenticeship scheme, but they were limited to what they could do, with the scheme under the responsibility of a different Ministry (MLHA).

Construction Industries Trust Fund (CITF)

This training organisation was established as a special fund under the Finance and Audit Act (1991) in response to a critical shortage of semi-skilled and skilled artisans during the NDP6 construction boom (Cardno Agrisystems Ltd/Cardno ACIL, 2006). It is similar to the Construction Industries Training Board of England and performs a similar role. The CITF provides competency-based modular training to upgrade the skills of employed artisans and craft people within building trades. There are proposals shown from the research to combine MTTC and CITF together particularly as they focus on the craft training and are on adjacent building plots.

Technician Training

A Polytechnic was set up in Botswana in the eighty's to provide technician programmes and these were initially based on the City and Guilds of London qualifications, but later as the Polytechnic was subsumed into the University of Botswana Faculty of Engineering, these became University certificate and diploma awards. In 2007, the University of Botswana in a desire to become only a degree and higher qualification offering institution transferred a majority of sub-degree engineering qualifications back to DTVET.

The Botswana Technical Education Programme (BTEP)

This modularised outcomes based vocational qualification was developed by DVET from 1999 under the MoE in partnership with leading employers to generate a more flexible, effective and trainable workforce. BTEP was developed in response to NDP 8 which stated that,

‘the future economic growth of Botswana will depend on the extent to which its labour force has skills and technical ability to make it competitive in the global marketplace, by providing occupational and pre-employment training to be undertaken following schooling’ (Republic of Botswana, 1998, p. 357).

With increasing numbers of JC leavers unable to access any further education or training, there was a need for an alternative to the apprenticeship and NCC qualification, which was not confined by the limitations of the Botswana limited business and industrial base. NDP 8 suggested the need to produce a revised vocational curriculum that would take account of:

- Skills applicable to work situations
- Subjects relating to the world of work
- Practical subjects that provide orientation to technology
- A curriculum that stimulates an awareness and understanding of the world of work and the available range of occupations.

The MoE through DVET in 1998/9 explored a range of options consulting with the UK awarding bodies; City and Guilds of London Institute (CGLI), Edexcel and the Scottish Qualification Authority (SQA). DVET eventually contracted with SQA to work in partnership in developing a new Botswana technician qualification.

The decision to develop a technician qualification came from earlier National Manpower Projections, which were restated again in a Botswana Institute for Development Policy Analysis (2001). These reports indicated that most citizens were only able to obtain manual trade jobs, with many of the technician level posts going to expatriates. The result was the importation of a curriculum blueprint loosely based on the Scottish General Vocational Qualifications creating a ‘hybrid’ called the Botswana Technical Education Programme (BTEP). The purpose was to increase opportunities for young people and more especially for women to enter education and training; to provide an internationally acceptable qualification which could lead to employment or small business self-employment. In particular, there was concern that there were insufficient opportunities for students to progress due to the limited

BGCSE places at the time. A rigorous curriculum development process with guidance from SQA was developed as shown in Figure 3. Each BTEP qualification was extensively researched with industry to establish the need, and then validated by an independent panel. Validation panels include related independent industry representatives and those from the University of Botswana. Qualifications are validated for between three and five years, by which time they are required to be reviewed and validated again to ensure their fitness for purpose.

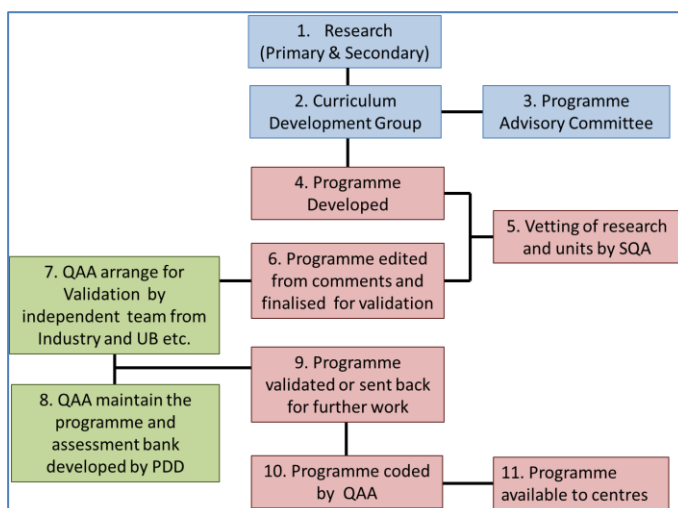


Figure 3: BTEP Curriculum Development Process, (DVET PDD Training Programme 2003)

The qualification was a major change for the GTC staff as previously student assessment associated with the NCC qualification was based on examinations conducted at the second, third and fourth years only. Each BTEP level was designed to be certificated and to enable students to either progress to a higher

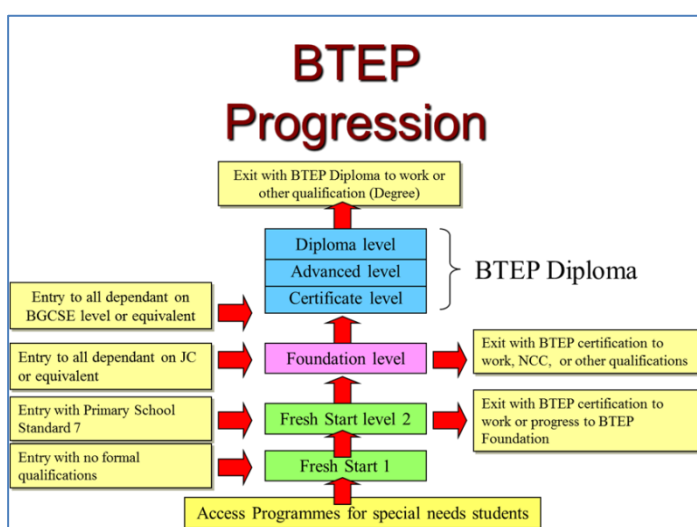


Figure 4: BTEP Access and Progression Routes. (DVET, BTEP Stakeholder Conference 2007, Morris)

level or to exit to industry and employment (Figure 4.). BTEP assessment was expected to be prepared and marked as part of normal lecturer duties, which did not engender the qualification favourably to some lecturers as for the NCC qualification they are paid to prepare and mark examinations. BTEP assessment is designed as continuous, and staff contributed to an assessment bank which is managed by the Quality Assurance and Assessment (QAA) unit which had been set up as the BTEP Awarding Body. With substantial support from an EU funded project, together with an on-going consultancy from the SQA which was still in place in 2010, significant progress was made and citizen expertise developed. The BTEP qualifications although slow to develop now cover a wide range of vocational disciplines; engineering, hospitality and tourism, construction, business, clothing design and textiles, hairdressing and beauty therapy, information communications technology and multimedia, agriculture, science, jewellery design and manufacture, social care, and sports and recreation.

The QAA, which is responsible for the quality of BTEP, was answerable to the MoE Permanent Secretary to create some independence from DTVET, who were responsible for the qualification curriculum development and GTCs. The QAA unit have ensured that the nationally agreed quality standards are maintained.

The real BTEP challenge for DTVET has been the need for their Programme Design and Delivery (PDD) Division to complete qualification design and reviews on time and to meet the requirements of an internationally quality assured qualification system. The agreement of SQA to monitor BTEP standards through the QAA roles and responsibilities have ensured that standards are maintained, but often at the expense of delaying programmes. BTEP curriculum development has always been slow but has been hampered further by staff shortages and the requirement that DVET officers have multiple duties such as reviewing Brigade activities, purchasing equipment and resources for institutions. For some years, they had also had a responsibility for reviewing private vocational training institutions but this now has been transferred to one of the new parastatal organisations (BOTA) which I will now describe.

Education Organisational Reforms

The education reform process in Botswana still continues in 2010, but perhaps the significant recent milestones have been the setting up of two key parastatal organisations in an attempt to manage the proposed changes towards an education and training market.

Botswana Training Authority

The Vocational Training Act, 22 of 1998, sets out the proposal for the establishment of the Botswana Training Authority⁵ (BOTA). Its purpose being to:

1. Coordinate vocational training activities in order to achieve better integration and harmonisation of the vocational training system developed
2. Monitor and evaluate the performance of the vocational training system being developed in order to ensure the successful performance of all training activities
3. Provide advice on policy related issues of vocational training.

BOTA was originally placed under the MLHA and is responsible for the regulation of work based training standards to the level of a skilled artisan/craftsperson. The 1998 Vocational Training Act states 15 functions, powers and duties of BOTA which include, access, registration, accreditation, monitoring, evaluation, development and review of national standards, identification of new training sectors, curriculum development, development of teaching materials, establishment of a national database, and the regulation of assessment and testing within the vocational training system being developed (Republic of Botswana, 1998, p. A.187). Much of the act appears to relate to the apprenticeship scheme and NCC qualification the only vocational artisan/craft training at that time. BOTA was intended to apply its mandate across both the government and private sector in recognising the growing importance of private sector involvement in education and training. The functions given to BOTA were to;

- Register and accredit both public and private training institutions
- Register and accredit trainers and assessors
- Develop and review national training standards system in accordance with the Framework
- Approve and guide the development of new and emerging vocations
- Regulate assessment and testing within the VET system
- Regulate the apprenticeship and industrial training

⁵ BOTA was set up as a parastatal with the long-term objective of becoming self-financing.

- Establish a vocational training fund
- Coordinate compliance and monitoring

Once established BOTA in 2001 indicated among its strategic objectives to:

- Develop the Botswana National Vocational Qualifications Framework (BNVQF)
- Establish and review policies, regulations and processes to guide the generation of;
 - vocational education and training standards to meet the needs of end users
 - quality assurance and monitoring processes to ensure compliance with the standards and consistency
 - criteria for accreditation of training institutions, programmes and the registration of trainers to ensure quality training.
- Develop incentives for business and industry to invest in training through, among other initiatives, the introduction of a levy system
- Explore and establish mechanisms for revenue generation leading to long-term self-sufficiency

As BOTA was the first of these two new parastatal organisational institutions to be established. They recruited some staff from DTVET and began to explore their new role. I will say more about BOTA and its impact on GTC as a result of the senior staff interviews later.

Tertiary Education Council

In 1999 the government published the Tertiary Education Act, to provide for the establishment of a Tertiary Education Council (TEC), and to provide for its powers, duties and functions (Republic of Botswana, 1999). Seven purposes were given for TEC in the act, but these are more simply laid out by the Tertiary Education Council (2008), in their Strategic Plan as:

- a. Policy and Strategy development
- b. Development of funding steering tools and financial efficiency systems
- c. Quality Assurance through registration and accreditation
- d. Reaching out to stakeholders and building the internal capacity of the Council secretariat.

The Tertiary Education Policy appeared in 2008 and laid out the challenges that Botswana faced of; fragmentation, economy of scale, private tertiary institutions,

quality and relevance, access, equity and participation and institutional climate (Republic of Botswana, 2008). The policy was intended to address these challenges by what they termed, a re-formed rather than just reformed tertiary sector (Republic of Botswana, 2008, p. 4). The policy states that tertiary education has a significant role to play in ensuring Botswana's successful transition from a resource driven economy to a diversified economy characterised in terms of a high skilled knowledge intensive service sector. The policy also indicates the intention of developing an increasingly market-driven, diversified, globalised knowledge-based economy, and to lift individual learner ambitions and capabilities beyond the narrowly focused needs and requirements of the labour market. It is suggested that it is this which will transform Botswana into a knowledge driven innovative society and which encapsulates the essence of the tertiary education mission, and distinguishes it from the rest of the education and training sectors (Republic of Botswana, 2008, p. 7).

The initial definition of 'tertiary education' attempted to separate it from skills training or from what it describes as discipline-based learning (*tertiary education*) and skills development (*work-based training*) although in doing so it recognised that both sectors are fundamentally different, yet they form a part of a single integrated national learning system (Republic of Botswana, 2008, p. 8). The policy continues to question the viability of small, single-purpose teaching institutions, but also recognises the importance of the provision from the state and the private sector. In summing up, it advocates the benefits of healthy competition, but also the need to rationalise existing un-economic provision. Three categories of provision are stated:

1. Research, Innovation and Teaching (One institutional type: University that provides a broad range of programmes from degree to doctoral level)
2. Specialised Teaching (Broad foundation, public and private who prepare students for the professions that have a high skills requirement)
3. Open and Distance Learning (Not existing at the time to focus on non-traditional students)

The Tertiary Policy states that the proposed changes should not be seen in isolation but raises the question of the appropriateness of existing government structures in managing these major initiatives.

National Human Resource Strategy (2009)

A substantial organisation and management review of government departments and ministries had been taking place in parallel with the setting up of TEC and BOTA

leading to the proposals for a major restructuring (See Figure 5) under a new body, 'The Human Resource Development Council' (HRDC) recommended by the Ministry of Finance and Development Planning (Deloitte, 2006). This was in recognition that tertiary education was changing into a market, with what was termed healthy competition, management of a burgeoning state/private tertiary education and training system, which would be operated via a new performance-related public funding model. This was to achieve financial viability, strategic capacity, effective governance and leadership, and efficient resource utilisation (Republic of Botswana, 2008, p. 15).

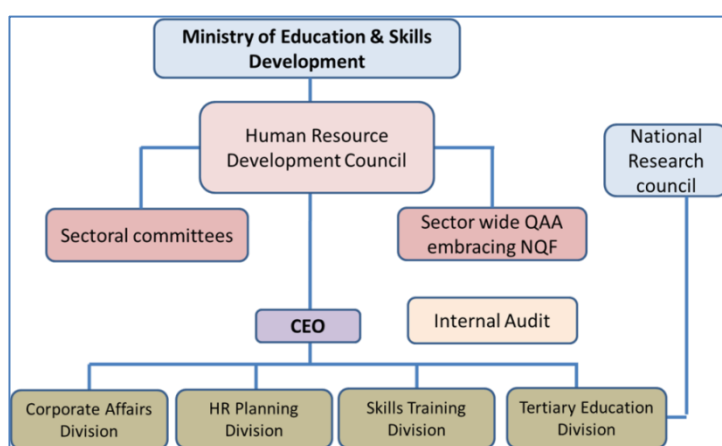


Figure 5: Functional Relationships of the new Human Resource Development Council. (Republic of Botswana, 2008, p. 19)

2008, p. 15).

The National Human Resource Strategy (NHRS), attempts to rectify some of the earlier misconceptions and problems that TVET was causing and which would attempt to resolve the responsibility issues between the earlier called MoE and the MLHA. It was proposed to transform the new bodies of BOTA and TEC into the Human Resource Development Council to provide a single agency and according to the strategy will become Botswana's think tank, national reference point, information hub, policy and planning advisor with delegated responsibility for certain key areas of strategic execution (Ministry of Education and Skills Development, 2009, p. 3). This document also announced the name change of the MoE to become the Ministry of Education and Skills Development (MoESD).

By 2010, when this research was carried out, structures had yet to be finalised and implemented. The new name change for the MoESD had been introduced but the debate appeared to be continuing as to what functions would transfer, particularly between ministry departments as I have referred to earlier and are highlighted later in the senior staff research interviews.

A new definition was given to tertiary education;

‘all formal education programmes beyond the level of senior secondary embracing technical and occupation-specific programmes and those with a strong theoretical foundation through to advanced research qualifications’ (Republic of Botswana, 2008, p. 16).

It is interesting to note that previously in 2007, the newspaper headline appeared, ‘Technical Colleges are not tertiary institutions’ said the Executive Secretary of the TEC (Reporter, 2007). The Executive Secretary was quick to state that this was because no GTCs were registered with the TEC at that point in time. The article however went on to report that the Minister of Education Jacob Nkate had stated, ‘that there was no reason why the government could not look at this disparity in view of the government policy to encourage students to follow careers in technical fields’ (Reporter, 2007). Although to my knowledge all GTCs had applied to TEC for registration, only four GTCs were later considered and registered in the tertiary sector. It was also stated that these GTCs would eventually become parastatal organisations so that they could compete on an equal basis in the new TET market. Perhaps the key issue on redefining TET was the recognition that BTEP was in fact a tertiary qualification leading to diploma level.

Botswana National Qualification Framework

In 2006 a study was completed for the establishment of a National Qualifications Framework in Botswana. This was developed from earlier studies, ‘The Comprehensive Review of the VET Qualifications Awarded in Botswana’ (2000) which sets out the rationale for a qualification framework and the EDF9 Feasibility Study for a National Qualifications Framework (2003) which suggests that the NQF will bring a coherence to qualifications, from the situation at that time which was described as characterised by inconsistency and fragmentation, which led to confusion and lack of comparability for learners and institutions (Cardno Agrisystems Ltd/Cardno ACIL, 2006, p. 8). An earlier report was the CEC Feasibility Study (2004) which provides a background for TVET, which identified the duplication of functions between the MoE and the MLHA. This report recommended the development of an NQF but gives no elaboration. Although since 2006 reference has been made to the intention of setting up an NQF, in reality there is little progress on its realisation (*bar the BOTA Vocational Framework.*) and its implementation has been very slow (Tau & Modesto, 2011, p. 367). This is surprising given the decision to enable the private sector to enter TET 2007 giving rise to a plethora of new

qualifications, certificates, diplomas and degrees which were imported from other countries; making it even more challenging for employers and students in establishing the value, quantity or level of the qualification. The quality of the new private sector institutions also came under the spotlight in 2007 where newspapers questioned why TEC had registered sub-standard colleges, to which the executive secretary responded that they were registered on a developmental approach (Baputaki, 2007). The continued questioning of the standards in TET particularly in the private sector remains a challenge for Botswana.

In this chapter, I have described the Botswana government education and training system with an emphasis on TVET qualifications and the organisations which are managing and delivering qualifications. I have also introduced the proposed educational reforms together with the new structures and associated bodies that are driving the change. Importantly I have shown the definition in 2008 that all education and training post-secondary is considered as tertiary. I conclude with details of the proposal for an inclusive National Qualification Framework which is yet to be implemented.

Chapter Four: Literature Review

In this chapter I explore further the varieties of capitalism and liberalism and their impact on developing nations. I then look at skills formation systems and their applicability to this Botswana case study.

The emergence and dominance of neo-liberal policies

Many nations have recognised that we live in a rapidly changing technological world where according to Brown and Lauder (1996) the globalisation of economic activity has called into question the future role of the nation state and how it can secure economic growth and shared prosperity (p. 172). This has led many countries to recognise that a nation's human capital is the most valuable sustainable asset that they have which needs to be nurtured and developed to full potential if they are to be successful in the twenty-first century. Just how to develop a nation's human capital was once highly debated between Marxists and Capitalists, but since the demise of the Soviet Union, Western liberal policies have been increasingly adopted in a belief that this is the only way to enable a nation's success in the global market (Samoff, 1999; Bonal, 2002). Although there are many types of liberalisation and free trade markets across the world, all can be identified in the rise of consumerism, individualism and the widening the divide between the rich and poor (Gray, 1998). Many education systems are increasingly being drawn into markets as a means to increase efficiency and raise standards, where students and parents are seen as clients and customers who demand the impossible, while ignoring the inevitable (Bottery, 2005, p. 271).

Neo-liberalism and its characteristics

The historical development of neo-liberalism is well documented so is not repeated here, but once communism was seen by many to have failed, it was considered that the market was the only way to deliver prosperity, democracy and social justice (Brown, et al., 2001, p. 99). Samoff, (1999) was clearly critical of this American triumphalism and their advocacy of neo-liberal ideology, which he attributes to the oil price rises in the seventies which saw economic growth in Britain and America fall to a disappointing 2% growth rate. National leaders such as Thatcher (UK) and Regan (USA) subsequently considered that socialism had dulled the entrepreneurial initiative of these two nations which saw a return to primitive capitalism where there would be less government interference in the economy in an attempt to stimulate market competition (Brown et al 2001). This finally saw a rejection of Keynesian economic policies in favour of a more radical right policy shift where the 'market' dominates. The rise in market globalisation required those nations participating, to

become increasingly economically competitive. Privatisation of public utilities and services were seen as the answer in the belief that government bureaucracies had become inefficient and unable to respond to rapid change and customer requirements.

There are few countries exempt from globalisation yet its impact varies between countries depending to the extent that national markets are open to the world. During the Thatcherite period in the UK embracing neo-liberal policies, resulted in a rapid deregulation of labour markets and a reduction in the power of unions. The focus was on commercialisation and individualism such that there appears a parallel weakening of traditional social institutions. John Gray believes that, 'individualist capitalism subverts cultural traditions more successfully than any government (Gray, 1998, p. 37). Michael Bottery also supports the view that individualism as a component of neo-liberal policies impacts national culture:

'The individualisation of consumption does more than just undermine civic and democratic ideals. It undermines and fragments cultural values as well. It does this in the first place by reducing first order cultural values and in so doing it weakens the cultural base upon which human relationships are founded' (Bottery, 2005, p. 283).

According to Stephen Ball, national crises are solved or are attempted to be solved in different ways according to the national context and situation but that:

'England holds a particular position as a political laboratory of political transformation first under Thatcher and then under Blair, which exports policy solutions across the globe' (Ball, 2007, p. 5).

New-Labour in Britain, for example, prior to 1997 recognised that to be elected would require that their party would need to move from the socialist left and to take what they describe as the middle ground or the, 'Third Way'. New Labour's policy in education was to some extent similar to Thatcher's primitive capitalist policies, which continued the curriculum centralisation with increased independence for schools, but with competition between schools in terms of league tables and student recruitment.

For UK technical colleges who had achieved incorporated status under the Conservatives this continued under New-Labour with money following student enrolment, retention and achievement together with reductions in institutional base budgets driven by the market lowest common denominator (Gleeson and Shain, 2003). Fairclough, (2000) in exploring the terminology used by New-Labour

suggests that it was promoted as a belief in social justice and economic dynamism, ambition and compassion, fairness and enterprise, coming together which is described as combining the global market and competition with a social conscience. Olssen et al (2004) describes the conflict and tension in New Labour's third way by citing Gewirtz (2002) who suggests that New-Labour continued the Conservative neo-liberal policies of promoting marketization, privatisation and competition in education but with a more 'humanistic' social democratic type policy which provided commitment to public services such as health and education by increasing the proportion of GDP invested.

Neo-liberal policy perspectives as a result appear to be a broad church, covering a range of opinions and beliefs although all significantly impact culture and national identities. Opinions on neo-liberalism range from Hayek and Friedman together with Buchanan and his Public Choice Theory, who advocate minimal state intervention. At the other end of a continuum is New Labour's third way, which promotes a more socialist approach to neo-liberalism requiring a strong interventionist state which invests in national systems, but which meets the needs of individual choice. Olssen et al. (2004) provides a helpful table, which describes three distinctive types of liberal policy, Classical, Welfare and Neoliberal (p. 180-181). National educational policies can be reviewed in Olssen's matrix table, which provides appropriate descriptors and classifications of the type of liberal policies being operated in a nation state. By scoring against this table I would suggest that Botswana is towards neo-liberal but with presently a strong welfare liberal tendency and with concerns not to lose their historical tribal and family social cohesion.

How the neo-liberal philosophical position is considered from other theoretical perspectives

Olssen et al. (2004) appear doubtful that New Labour's 'third way' model can reconcile the differences between neo-liberal and the social democratic agendas. They point out the issues surrounding the individuality within neo-liberal policies as being in conflict with community well-being and social cohesion. Olssen et al. (2004) go further by suggesting that neo-liberalism is an enormous threat to the provision of public education by democratic states (p.198). One of the major problems of neoliberalism according to Keynes, cited by Olssen et al (2004) is the fact that open markets lack the ability to ensure any self-regulation which in turn requires that the state must provide a regulatory framework and some means of measuring and ensuring quality standards and accreditation of education delivery. New-Labour in the UK introduced a regulatory framework which has been continued by the

Conservatives and the subsequently elected coalition although it continues to need adjustment. Brown and Lauder (2001) suggest that introducing 'markets' into education is a return to primitive capitalism. They argue that market reforms have increased the inequalities of opportunity that had existed previously and suggested that the educational reforms have de-skilled teachers and led students to focus on a narrow curriculum, which will result in low wage and a low-skill economy (Brown and Lauder, 2001, p. 135).

The impact of globalisation

Brown et al. (2001) and Olssen et al. (2004) suggest that many governments have shifted to the right of centre politics towards neo-liberalism due to the economic, cultural and political influences of globalisation. Olssen et al. (2004 p.5) suggests that the economic globalisation is about the free flow of goods services, investments, labour and information across national borders in order to maximise capital accumulation. This increasing national interdependence on goods and services has resulted in the need to harmonise trade transactions, communications, transport, labour and educational qualifications, etc. As companies have become trans-supranational, it has brought an inevitable unification of systems and procedures impacting on national sovereignty and culture. Olssen et al. (2004) records that economic globalisation does have some strong opponents by citing; Manders and Goldsmith, (1996); Gray (1998) and Chomsky (1999) as well as those who are cautious and sceptical such as Soros, (2002) and Stiglitz, (2002). For others, there is the view that globalisation is unavoidable and that countries should capitalise on the opportunities that it brings. Stiglitz, (2002) in recognising the potential for good that globalisation can bring to developed countries, also sees that for many in the third world that it has had little to no impact. Dale, (1999 p. 6) in exploring the globalising effects on national policy demonstrates the complexity by suggesting eight external effect mechanisms of policy transfer that are clearly demonstrated through his matrix. These effects range on a continuum from, borrowing to imposition. Bonal (2002) states that in contrast to policy borrowing or policy learning, that the WB and IMF loan conditionality for developing countries are clearly a case of policy imposition. Dale (1999) postulates that globalisation does not impact national policies as much as we might think, in that countries respond differently to the external global mechanisms, resulting in dissimilar national policies of which no two are alike, being shaped by culture, the level of economic development and country context.

Importance of education and training within any form of governance

Previously in the 1960's education was seen as a national investment rather than individual consumption, according to Samoff, (1999) and Moore, (2004). Moore suggests that education develops the productivity of human labour and that labour is increasingly the most significant factor in economic productivity and competitiveness (p.35). In view of this, industrialised nations began to make substantial investments in education and organisations such as the World Bank (WB) and International Monetary Fund (IMF) have been encouraging developing countries to do the same. Heyneman, (2003) suggests that the WB is the object of much criticism, particular with reference to the conditionality it places on loans, which promote a neo-liberal approach, requiring increased privatization in education and the raising of student loans and fees, which exacerbate the division between the rich and poor. Most countries according to Elteren, (2003) have capitulated to the neo-liberal forces at work in the media and cultural world, which amounts to, 'Americanization' (p.175). Elteren is critical of this capitalist, individualist culture believing that it cannot really satisfy people's needs for community involvement, and meaningful relationships with transnational corporations having no interest at all in improving people's quality of life or strengthening civil society (p.182).

Models of capitalism and country exemplars

This does not imply that globalisation is drawing all country systems towards a single model of capitalism. National systems are very much dependant on historical and political experiences and the backwardness of some nations (Crouch, 2005; Bresser-Pereira, 2012). Equally economists rather than treating each country individually tend to group countries according to certain criteria but often these vary. Hall and Soskice, (2001) in *Varieties of Capitalism*, take what they call an actor centred approach suggesting that firms or companies are the key actors in a capitalistic economy. They suggest five criteria which can be used to examine the form of capitalism adopted:

1. Industrial Relations
2. Vocational Training and Education
3. Corporate Governance
4. Inter Firm Relations
5. Employees

Each of these criteria is expanded to provide a description to enable analysis and can be used to examine individual counties. Briefly 'Industrial Relations' relate to how companies manage wage control and working conditions. 'Vocational Training

and Education' is how companies secure a workforce with suitable skills and how individuals decide the value of and investment in training. 'Corporate Governance' is related to how companies raise finance and satisfy and ensure a return for investors and employees. 'Inter Firm Relations' is how companies cooperate with others in knowledge exchange, technology, and research. 'Employees' is how to ensure they have the appropriate competences and team working skills to advance the goals of the organisation. Hall and Soskice, (2001) propose that national political economies can be compared by the way that companies resolve the coordination challenges across these five criteria. Hall and Soskice, (2001) also suggest two ideal types at either end of a continuum, liberal market economies and coordinated market economies. Crouch, (2005) drawing from the work of Michel Albert (1991) suggests that these could be called the Anglo-Saxon and Rhenish capitalist systems. The Anglo-Saxon form is defined towards free market capitalism (neoliberalism) and suggested as incorporating countries such as the UK, America, Australia and New Zealand. The Rhenish model is seen as towards (Social Democracy) greater controls of market capitalism such Germany, the Netherlands, Switzerland and to some extent France as well as Scandinavia and Japan. Bresser-Pereira, (2012, p. 26) suggests that there was a tendency of the coordinated market economies to move towards liberal market economies until the 2008 global financial crisis and since then tended to move in the opposite direction in the belief that the crisis was a result of neoliberalism. Inevitably this dualistic simplistic approach is seen as limiting by some, resulting in proposals for other criteria and divisions of capitalism but academics rarely offer more than five types. Bresser-Pereira, (2012, p. 25) proposes three models of capitalism. In modern developed countries, 'liberal democratic (Anglo Saxon countries), the 'social or welfare' (most European developed countries) and the endogenous, 'social integration model' (Japanese). Bresser-Pereira goes further by suggesting that developing and middle income nations who have embraced capitalism can be categorised as following a 'development model' of capitalism (China, India and the other dynamic Asian countries) and the 'liberal dependant model' which characterises countries such as Argentina, Brazil, Turkey, Mexico and South Africa which have also been encouraged to follow this path by the World Bank. The Japanese model of capitalism is different from the liberal and social European system in that the state leaves social protection to households and business enterprises. This worked well in the past providing reliability of employment and social care in return for an individual life time commitment to the business enterprise. Unfortunately following the 1990's crisis, Japan has since struggled to restore significant economic growth and maintain its lifelong employment guarantee.

Bresser-Pereira, (2012, p. 26) suggests that the 'development model' is inspired by the Japanese model which is characterised by the informal existence of a national development strategy – a system of laws, public policies, agreements and understandings that create lucrative investment opportunities for entrepreneurs – implemented by strong state intervention in the economy so as to make this strategy operational and with low labour protection. It is difficult to say which form of capitalism is best as all have strengths and weaknesses and are shaped by the history, politics, nation state culture and increasingly global competition. Liberal markets have produced great economies and wealth as in the USA but it has also resulted in painful economic depressions and recessions and also in increasingly great economic inequalities (Judge, et al., 2014). Judge, et al. (2014) argue that the proper and legitimate role of an economy is to create wealth for all of its nations citizens and to do this in an equitable fashion (p. 365).

Consultancy views on Sub Saharan Africa

Samoff (1999) suggests that many of the externally initiated studies of Africa are surprisingly similar, in that they suggest that education is in crisis, quality has deteriorated, management is poor and administration is inefficient, funds are misallocated and governments cannot cope. The recommendation to solve these problems according to Samoff come from expatriate-led study teams who diagnose problems and prescribe solutions where 'learning' disappears from view, buried by the focus on finance (Samoff, 1999, p. 51). These suggestions are to reduce the central government role in providing education through decentralisation, increasing school fees, expanding private schooling, reducing direct support to students especially at tertiary level, introducing double shifts and multi-grade classrooms, assigning high priority to instructional materials and favouring in-service over pre-service teacher education. These are views echoed by the World Bank Skills Development in Sub-Saharan Africa report (Johanson & Adams, 2004). It draws from the earlier WB (1991) policy document which proved to be controversial to public stakeholders, as it was considered biased towards private providers and the reform of public TVET systems and thus to the marketization of training delivery. The 1991, WB study described a diverse TVET market for skills development globally consisting of public and private provision. Importantly however they found that public provision could be cost effective when accompanied by new forms of organisation, management and financing (World Bank, 1991, p. 11). This later 2004 WB report strengthens their policy stance in increased institutional autonomy and capacity, along with performance-based budgeting and diversified financing

arrangements through public, private partnerships. It is argued that governments need to get the policies right for establishing training markets that would provide for a level playing field for all parties and that attention should be given to fostering reforms, rather than making massive new investments in the public capacity. On the positive side the WB (2004) report does point out that state systems frequently respond to the demand for more costly skills, particularly at tertiary level and provide better geographical coverage. It is also suggested that where public training systems are centralised that they can become more responsive when more powers are delegated to institutions to set fees, adapt training to local needs, hire staff and choose methods of instruction. The shift from financing inputs for training to financing performance and outcomes is suggested as a methodology for incentivising improvements (Johanson & Adams, 2004).

African Investment in education and training

African countries have according to the WB (1988) invested heavily in education since independence due to the need to produce indigenous personnel at all levels to replace expatriate rule and to manage the complex challenges of nation building. Education is viewed as a basic human right, an end in itself and an intrinsic element of the developmental process. Bonal (2002) suggests that the influence of the WB on education has expanded substantially, in both quantitative and qualitative terms. This is demonstrated by the number of WB loans given to developing nations towards educational initiatives that now constitute the largest funding agency in the World. For many of the poor and underdeveloped countries in Africa, projects and loans have come with strict loan conditionality (Penrose 1998; Samoff 1999; Bonal 2002; Heyneman 2003). This clearly has influenced educational policy reforms such that governments have been encouraged towards western neo-liberal policies (Penrose 1998; Owino and Abagi 2000; Kaonga 2001). Many of the WB research projects, policy papers and evaluations, according to Bonal (2002 p. 5) promote the virtues of the market as the only way to overcome the inefficient and corrupted bureaucratic state. The WB is, therefore, seen as a major globalising influence on educational policy (Samoff 1999; Dale, 1999). For many third world countries WB loan, capital has been attached to stringent Structural Adjustment Programmes⁶ which call for the adoption of externally specified national policies and the surrender of some national autonomy (Samoff 1999 p 59). The imposed policies through the WB Structural Adjustment Programmes, stem from the economic policies derived

⁶ Structural Adjustment Programmes relate to adjustment of National Policies to changing demographic and fiscal realities (World Bank 1988)

from the American “Washington Consensus” in the early 1990’s, whose measures are to;

1. pursue macro-economic stability by controlling inflation and reducing fiscal deficits;
2. open economy to the rest of the world through trade and capital liberalisation;
3. liberalise domestic product and factor markets through privatisation and deregulation (Bonal 2002 citing Gore 2000 p789)

The implementation of these measures for many Sub-Saharan countries has resulted in the introduction of user fees for health and education (Penrose 1998; Owino 2000; Kaonga 2001). The WB (1998) in relation to the encouragement of rapid expansion of education in Africa for many countries since independence, point out that public spending had fallen, such that there was a need for diversifying sources of funding. The WB (1998 p. 3) recommended that this could be achieved by:

- Increased cost sharing in public education and through increased official tolerance and encouragement of nongovernmental suppliers of educational services.
- Unit cost containment. This is suggested to be more important than diversifying sources of finance. The most promising areas for containing costs are suggested as utilisation of teachers, construction standards and the tendency of students to repeat grades or drop out of school.

To be fair, the WB does suggest that these policies should be directed at the education tertiary level, due to the fact that a third of public expenditure in the typical country now includes student welfare costs, as distinct from pedagogical costs. It is also suggested that there is a higher rate of return for those students completing tertiary education and as graduates have increased employability opportunities that it would be reasonable to expect them to repay government educational loans.

In 2007 the African Union proposed a strategy to reform TVET drawing from a number of country case studies. It continued the earlier themes of earlier World Bank reports (1988; 1991) positioning TVET as a vehicle for stimulating economic growth, reducing poverty and promoting responsible citizenship and good governance. This African Union strategy promotes the centralised Singapore model and the German dual system as exemplars of good practice, both of which appear to me to be rather remote from the socio-economic context of the majority of

countries on the African continent. Fortunately the report does recognise this by suggesting that any credible TVET strategy must fit within individual country cultural contexts, a view supported by others (Hofstede, 2003; Lewis, 2007, 37:4). Towards the conclusion of the report it states a common African saying;

‘In Africa we are good at drawing up strategies and plans, but when it comes to implementation there is always a difficulty (World Bank, 2007, p. 41).

Implementation as we will see is the challenge for Botswana as it grapples with its planned radical change.

Structural elaboration and skill formation

TVET is often managed differently in each country even when they have borrowed or copied systems from other countries and even these systems tend to evolve over time and economic growth. Earlier I have referred to the work of Hall and Soskice (2001) who suggest that to understand the development of national systems requires an understanding of the organisation of work within enterprises and their interdependence. Although countries may have developed their own unique systems and structures these are generally grouped together under a small number of contrasted types (Crouch, 2005) for comparative purposes of TVET. According to Ashton, et al. (2000) citing Furth (1985) in an OECD study which focused on post-compulsory TVET, it identified three models of educational provision; the ‘school model’ (US, Canada and Japan), the ‘dual model’ (Germany, Switzerland and Austria) and the ‘mixed model’ (UK). Inevitably others have continued this discourse but with different typologies and using different criteria. Ashton et al, (2000) cite the work of Edwards and Garonna (1991) who identify three models of government regarding training. Firstly the ‘interventionist model’, where the government assumes responsibility for financing, stimulating or organising training. Secondly, the ‘devolution model’, where central government delegates responsibility for coordinating training to regions and thirdly, the ‘flexibility model’ where training activities are turned over to the private sector. The interventionist model is described as similar to the role of the South East Asian tiger economies. Botswana has followed the, ‘interventionist model’ similar to many other developing nations when economies are small and industry and business is in its infancy. Botswana has however always stated its commitment to privatisation in the belief that government bureaucracies are ineffective and inefficient and for this reason tertiary education institutions were established as parastatal organisations to largely carry out their own management but underpinned by government finance.

Ashton, et al. (2000) following their review of other classifications systems present their own as; the 'market model'; the 'corporatist model'; the 'development state model' and the 'neo liberal model'. I propose to use these models to examine Botswana tertiary and TVET sectors so will describe these briefly.

The Market Model

Ashton et al, (2000) suggested that it was originally the UK and USA that adopted this model after the Second World War. Once institutionalised in the UK, then it was replicated in former colonies such as Canada, Australia and New Zealand. Growth was led by the private sector and coordinated through the market. This was initially based on low value industries such as textiles, footwear and higher value-added industries in engineering for export until their market share began to be reduced by the growing Asian economies. The political dominance of the national capital provided the basis for a legal framework encouraging individualism and the exclusive use of the market for wealth generation and the delivery of training. This saw a demise of the apprenticeship system with unions focusing on wages and conditions rather than training standards and content. Training is generally seen as the responsibility of employers although in the England this has been a mixed success. Coordination of the supply and demand for skill is through the market and as such, subject to a variable labour market skills supply. Training skills and competencies are reduced to the minimum requirement of industry and business needs. The government response to global pressures is to try and make the market more effective. There have been short periods when attempts have been made to regulate training but to little effect and quality has been encouraged through voluntarist measures such as various quality awards. Lauder and Hughes, (1999) provide excellent arguments for why markets in education do not work and lead to an increasingly divided society. Markets are intended to give consumers choice and reduce costs, but in reality it is about getting the consumer or customer to pay more of the cost of education and training. The quality of education and training may vary dependant on how much you pay or how much you can afford or indirectly where you live. Brown, et al. (2001) argues that this model leads to a low skills economy. It is also a model that I would characterise as, 'reactionary' as training increases or decreases according to industry and business demand. Unfortunately it fails to recognise that training is a process that takes some time to achieve an output; often too late for industrial immediate needs. This model will also use individuals trained in other countries to supplement national skill shortages to supplement the time taken to train sufficient citizen labour.

The Corporatist Model

Countries such as Germany, Austria, Switzerland, Netherlands and Denmark are following a corporatist model according to Ashton, et al. (2000). Here the government and state play a more prominent role in driving industrialisation to break into the global market. The national education system is used to provide appropriate skills for nation building. The state encourages economic growth with strong labour unions concerned with not only wages and conditions but also training within a social partnership arrangement. The market is controlled within a framework determined by the collaboration between state, employers and labour unions/guilds. The system has created trust and worker protection and led to a supply of highly skilled labour for which employers have to compete by developing higher value-added products and processes. The result is a broader based initial training for all individuals providing a pool of highly skilled employees which leads to a closer fit to industry and business long term labour demands and skill requirements, resulting in less variable skill shortages than in the first model. It is suggested that countries identified under this model have resulted in high skills economies (Brown, et al. 2001).

The Development Model

Countries such as Singapore, Japan, South Korea and Taiwan are attributed to this model (Ashton, et al. 2000). Initially countries needed to use their key advantage to access world markets which was often through cheap labour with low skills. These countries then used the state education system for nation building and social control which is tightly controlled. Teachers, curriculum and student progression is also strictly managed for quality and to maintain and raise standards. TVET is generally government run and coordinated even when supported by industry and business funding. The government through institutional structures facilitate the demand for skills through the education and training supply system. Where countries began with low value-added goods to provide full employment this has developed into high value-added industries as a result of the government investment in education, training and research. When unemployment has occurred as a result of global factors the government has then developed policies and training programmes for getting the unemployed back into high skilled jobs rather than low skilled jobs, reducing the requirement for unskilled employees and leading to high skills economies.

The Neo-Liberal Model

Examples of countries which have followed the neo-liberal model are given as Chile, Mexico and Brazil (Ashton et al. (2000). The governments and state played an important part in initiating the process of industrialisation which resulted in a weakness of dependency on the export of primary products and resources and the importation of technologically advanced products. Problems became more apparent during the oil crisis of the 1980's when attempting to secure foreign exchange leading to a financial crisis with high inflation. The price for help from the IMF was a requirement to introduce market forces, and to deregulate the economy. Due to the lack of any regulatory financial infrastructure, it is referred to as the neo-market model by Ashton et al. (2000) distinguishing it from the earlier described market model although in many ways they are similar in my opinion. Previously the large scale centralised state industries had provided large scale employment, strong labour unions and generally a more balanced national income. Education was initially centrally controlled as necessary for nation building and improving literacy and national skills. The IMF required that this should change and government control of training relinquished to the market although some countries continue using financial incentives to stimulate employer training schemes. This has exposed many developing countries to international competition with the consequence of them moving more towards low value-added forms of production to take advantage of the surplus labour and natural resources. The only intervention by the state is in the case of market failure. Generally industry trains for its short term needs requiring governments as in the previous models to invest in broader based high standards of education and training. The dangers are that if insufficient education and training is given to citizens, then the national economies remain at a low skill level and are unable to attract high technology industry investment.

Estevez-Abe, Iversen, and Soskice, (2001) suggest three types of skills associated with different market strategies; namely firm specific, industry specific and general skills. The first is achieved through on-the-job-training and is focused purely on the company products and processes so is not necessarily transferable to other companies. Secondly, industry specific skills are achieved through apprenticeships and TVET schools and colleges and are appropriate to any employer within that specific area. General skills are recognised by all employers and carry a value independent of the firm or company and are transferable.

Employment protection is the value that individuals consider is worth investing in a particular skill set (Estevez-Abe, et al., 2001) and this will vary according to the

political infrastructure and the employment and unemployment benefits available nationally. An example is given of Germany where industry specific, firm specific skill mix is in evidence and in Denmark where industry specific skills are given high unemployment protection. The USA is suggested as providing low unemployment protection where as Japan is suggested as generally providing high employment protection.

Botswana's Education Market Model

I have shown that pre independence in 1966, Botswana a British protectorate had received little to no investment in their country infrastructure and nation building. The new government required educated personnel, but very few Botswana had received even a basic education and those that had, had mostly achieved so outside of the country in South Africa and the UK. Fortunately diamonds were discovered shortly after independence and the income was used to establish roads, schools, health and social care and the necessary governmental infrastructure. The mineral income ensured that Botswana has never been subject to WB and IMF structural adjustment programme and has therefore been able to apply only policies which are deemed to be beneficial to their national interests. Perhaps the early experience of poor advice from the WB when they set up their first partnership contract with DeBeers made Botswana cautious and to make their own minds up as the benefits or otherwise of following WB advice and policies. Initially Botswana did have school fees for primary and secondary levels, but as mineral income began to flow these were removed and only later reintroduced in 2007, for the reasons given earlier that parents and pupils did not value free education. Whether this was a pretext it is difficult to tell but the school fees are low and there is provision for those who cannot afford payment under the government's social services provision.

Botswana could be said to have elements of each of the four models described by Ashton et al. (2000). If these four models were plotted graphically on an X/Y axis then I would suggest that Botswana tends to be within the 'development and market' model quadrants rather than in the, 'neoliberal and corporatist' model sectors. Government primary schools were the first to be established and many expatriates were required to teach until the pupils graduated and then these were used to teach future primary cohorts. Secondary education followed and it was not until 2010 that all pupils had access to the senior level and to take BGCSE's. Parastatal tertiary levels began fairly early in independence with the establishment of the University, Accountancy, Business and Teacher Training Institutes, all primarily to provide education to levels appropriate for employment in the government civil service.

Technical colleges were established initially to provide the theoretical component of the NCC apprenticeship scheme but later expanded to provide access to those students who had been unable to progress to the senior secondary level and tertiary institutes. There was a Polytechnic parastatal established to teach City and Guilds technician qualifications but this was later integrated into the faculty of engineering at the University. More recently the university engineering technician programmes were transferred back to DTVET in a desire to deliver only degree and above qualifications. The incredible financing of education and training which Botswana is highly commendable and something that few other economies in the world are able to match, but which even they recognise in the long term is unsustainable but might be considered as part of the, 'developmental market' stage. Much of this investment has been to build new schools, technical colleges and even a second government funded University focusing on science and technology but this latter construction has been held back by financial constraints. Botswana has made a commitment in its Vision 2016 to develop a high skills knowledge society and as such has looked to other developing nations to see how they have achieved this (Singapore, South Korea, and Malaysia). Education is for the greater part of the population state run and managed through the civil service and has been described earlier. Private education providers have always had an opportunity to establish themselves in Botswana but only in 2007 were tertiary education and training providers encouraged to proliferate with the attraction of access to the government GLS for students. This was to increase access to tertiary education and training for students and to limit the cost and numbers of students studying in other countries. These new tertiary institutions are all situated around urban areas and tend to provide programmes that are less resource intensive. The Botswana government had always expressed a desire to introduce a 'market capitalist model' which is not so surprising given the close connection with the British and English speaking countries. Evidence of this market model in Botswana was the establishment of parastatal organisation at education tertiary levels and in other government ministries. This has escalated since 2000 in the establishment of BOTA and TEC as parastatal organisations to coordinate tertiary education and work based training. More recently tertiary financing has also been established as a parastatal in the hope that they will manage the student fees and grants with greater effect and return on loan recovery than previously under the civil service. Influences of the market and neoliberal models can also be found in a community and employer opinion survey on VET in 1997 (Obok-Opok, et al., 1997). Training for social demand was advocated by 60% comprising all government trainers (GTCs and Brigades),

although private providers, industry and the university recommended training for labour market demand. Although the apprenticeship scheme was developed in Botswana with German support it lacked the dual system social partnership arrangement which would have given it greater strength and quality. With the very limited Botswana industrial base it was never likely to achieve the 'corporatist model' although the Government have and continue to play the major role in initiating and driving economic industrialisation in an attempt to expand access into the global market. A levy system for industry to encourage companies to become more involved in training has been introduced by BOTA but this appears to have had little success to date. BOTA also introduced student registration fees and lecturer registration fees for GTCs and the Brigades but with BTEP finally being agreed under the GLS scheme, it is too early to say if this will now obviate the need for these students and lecturers to pay fees as they should now be considered as tertiary students under the GLS. If this is the case then it will only be the NCC apprentices who will now be required to pay registration fees to BOTA. BOTA have expressed their intent to changing the apprenticeship NCC qualification into a competence based programme. The qualifications will be based on industry based occupational standards and as a result may reduce the present slightly broad based NCC developed by the Germans. The TET sector continues to evolve and parastatal organisations are planned to be rationalised into larger units but what the final shape will be is still too early to say. BOTA and TEC are proposed to be amalgamated, perhaps in recognition that Botswana cannot replicate the organisational structures of larger nations. There is a clear indication that Botswana would like to encourage students particularly within the TET sector to contribute more to their tuition and living allowance costs by increasing the loan proportion of the GLS and by transferring loan recovery to a delegated parastatal where they are hopeful of achieving greater recovery rates. Only time will tell if this is successful or not. Quality control of the tertiary sector lies currently with the TEC but they appear to be severely understaffed to manage this in the longer term effectively. There have been criticisms of the quality of new private institutions but the TEC believe that some time needs to be given to them to improve their resources to compete within the new market. A qualification framework has been proposed but little has taken place to date and controls and regulations are likely to be introduced later as problems arise similar to the English system.

Considering the three types of skills associated with different market strategies according to Estevez-Abe, et al. (2001), Botswana has a very limited economy and

business base largely mining but increasingly on tourism, business and the financial sector. Botswana has stated its intent to become a business and financial centre for the region given their internationally recognised stable governance and fiscal reliability. Mining by its nature employs only small numbers of people although diversification such as diamond sorting and polishing is expanding by giving company's preferential opportunities on the extraction cut. Apprenticeships are specific to the industry and skill/competence requirements but do complete a more generalised theoretical component (NCC). It is suggested that more companies would take apprentices if they are able to claim back some of the industrial levy through BOTA, but to date this appears to have been unsuccessful and companies are reluctant to commit to training employees presumably because of concerns that they may leave for other employment or take a government grant to launch their own business. The BTEP is an industry specific but broad based unitised qualification in which industry and business have cooperated to develop the programme and quality assurance. Each qualification includes the key skills of communication, numeracy, entrepreneurial skills, personal and interpersonal skills and Information communications and technology (ICT). For this reason it is a broader based qualification than the NCC apprenticeship scheme. Only time will tell if these students will provide the trained personnel that industry requires once they begin graduating at diploma level. Early signs, where some students have entered industry from the lower levels have been encouraging, but ideally students should complete the diploma level to enable any comparison with degree level students. An increasing industrial attachment is part of the BTEP yearly programme of study giving a great opportunity for industry and business to assess and select young people they like for employment. Employers would then need to train individuals in their company specific skill requirements.

There is increasing difficulty of university graduates finding employment with the expansion of the tertiary market particularly as they are criticised as not having the required competences for business and industry. Previously, nearly all those students graduating in Botswana were employed in civil service posts but now the government is capping any more expansion of its services in the belief that private or parastatal organisations are more efficient and effective. A graduate internship programme has been established to give provide industry and business experience and to increase their employment opportunities. There is also an opinion that increasing the numbers of qualified graduates may encourage business and industrial companies to establish themselves in Botswana and that even where this

is not the case then graduates will be capable of gaining employment within the region or abroad.

In this chapter I have shown that globally, many countries have been influenced to follow neo-liberal policies or a variation on this which includes privatisation, cost sharing and the opening up education and training to private sector involvement where ever possible. England is shown as an exporter of policy solutions generally following the market and neoliberal positions. The importance of education and training within a national form of governance is recognised as essential, yet models of capitalism vary extensively which can yield very different skill formation methodologies. High skills knowledge economies are identified following particular capitalistic models where the government is in partnership with other key groups such as professional organisations and trade unions as the main drivers initiating, investing and developing the future population to ensure that the highest standards of innovation and quality are achieved through rigorous mandatory structures and frameworks. The chapter concludes by suggesting that Botswana is following a development and market model as described by Ashton et al.(2000) in tertiary education and training in a desire to compete within the global economy..

Chapter Five: Research Methodology

In this chapter, I present my theoretical foundations for this research and justify them as appropriate for the intensive case study methodology selected. I begin by describing my post-positivism position. I will look at my proposed data collection methods, research strengths and weakness, reliability, validity and ethics.

Schostak, (2002) suggests that the governing paradigm is rarely clear and distinct but lies unconsciously, and the researcher must interrogate its foundations throughout the research journey. Early I indicated that my background was in engineering and as such, was all about the definition of the measurable and the collection and analysis of data to create or solve problems or gain greater efficiency in a world of generally tangible real objectives or solvable challenges. Engineering has its foundation in the scientific management methods of F. W. Taylor, who was most probably influenced by August Comte considered as the father of positivism. Unsurprisingly I would regard myself with a leaning towards a paradigm of positivism, empiricism, quantitative and a fixed design approach to research. Positivism although much criticised; is still used by many in practice today (Robson, 2002, p. 9).

Schostak (2002) relates that the advent and expansion of positivism had two major effects on the theory and practice of research. Firstly, social research broke away from philosophy and was established as a legitimate and independent discipline. Secondly, research became empirical and quantitative, and dominated the social sciences almost entirely. Inevitably the 'one model fits all' came into question, and the dominance of positivism was challenged as social scientists questioned its fitness for purpose. Although there are many criticisms of positivists (Seal, et al., 2004) which Sarantakos (2005) lists, perhaps the one that stands out for me is that it places an overemphasis on quantitative measurement and struggles to grasp the real meaning of social behaviour.

The central principals of this opposition to positivism methodology are taken from a relativist orientation, the constructivist ontology and an interpretivist epistemology (Sarantakos, 2005). Constructionism in contrast to positivism believes that there is no objective reality and that research focuses on the construction of meanings, which emerge out of people's interaction with the real world (Sarantakos, 2005). Constructivists have grave difficulties with the notion of an objective reality which can be known (Robson, 2002) unlike positivism. The many varieties of qualitative research certainly provide a different perspective and valuable contribution to social

science, but like positivism it also has weaknesses, one of which is its often small sample size, which it is argued, reduces the representativeness of reality (Sarantakos, 2005) although it inevitably depends on what the sample is.

Post-positivism according to Robson (2002) is the recognition of the criticisms made against positivism and the acceptance that the theories, hypotheses, background knowledge and values of the researcher can influence what is observed, but generally has not moved substantially from the roots of positivism. Many researchers appear to be unprepared to countenance what often are seen as opposing research methods, let alone combine the two together. Clearly both quantitative and qualitative methods provide a different way of looking at problems and situations although they do appear to have certain specialist applications. Burgess, (1984) suggests that to research individuals in social situations, requires qualitative methods, to interpret the meanings of the actors involved. Alexander (2000) in criticising positivism's quantitative methodologies suggests that they are insufficiently searching to probe beyond the observable and counter moves of pedagogy to the values and meanings which these embody. Others take an even stronger line stating;

For the claim "to get closer" to the individual's point of view" appears to differentiate qualitative research beautifully from those benighted number crunchers whose concern for mere "facts" precludes a proper understanding of authentic experiences (Seal, et al., 2004, p. 3).

Both methodologies are subject to value judgements and selectivity of data giving rise to clear strengths and weakness (Johnson & Onwuegbuzie, 2004, p. 19/20). Quantitative research is an instrumental tool for studying social events and their interconnectedness so that general causal laws can be discovered (Sarantakos, 2005, p. 33). Simply quantitative research tends to be large scale and is particularly relevant when measuring numbers, quantities and finance etc. and is helpful for indicating trends and patterns (Robson, 2002), whereas qualitative research is normally smaller scale but often captures the human side of values, views and perspectives (Silverman, 2000). Although many researchers believed that positivism and relativism were incompatible and diametrically opposed, it called for a third way of realism, or as Bhaskar, (1989) postulates; critical realism. Critical realism is a desire to get away from as Robson, (2002 p. 43) suggests the 'paradigm wars'. Both paradigms have value (Johnson and Onwuegbuzie, 2004) and as a result there has been a growing interest in using a mixed or multi-method approach (Tashakkori and

Teddlie, 2003; Johnson and Onwuegbuzie, 2004; Lauder, Brown, and Halsey, 2004). In this way, a triangulation or contributory balance of methods can be used (Scholz & Tietje, 2002) to provide greater validity and reliability of results.

Research Design and Research Questions

Sarantakos, (2005) describes clearly that social research is complex, diverse and pluralistic. He suggests that different methodologies produce different research designs. Selecting Botswana to address my research questions is clearly a case study which would typically involve multiple methods of data collection (Robson, 2002, p. 178). Case studies can be developed within either a qualitative paradigm or according to quantitative principles according to Sarantakos (2005, p. 211). Case studies may be either many cases superficially covered or a few cases (Gerring, 2007) or as here; one case studied intensively. The intensive case study should provide us with tentative ideas about the social phenomenon, based on knowledge of the studied event, organisation or country, and 'how it came about' (Swanbon, 2010, p. 3). The methodological status of case studies is questionable by some (Gerring, 2007) but by applying both qualitative and quantitative methods within a rigorous framework, I believe it can provide a pathway to causal analysis, using mixed methods approach.

The research questions are the determining factor which should guide the appropriate methodology according to Miles and Huberman, (1984, p. 42). In

Research Questions	Sub Questions
1. What impact has the TET market and its related organisational change had on Botswana Government Technical Colleges and in particular on the Botswana Technical Education Programme qualification?	<ul style="list-style-type: none"> • What is the structure and organisation of Education and Training in Botswana? • What do the TVET reports and literature say? • What is the impact of the 'Tertiary Market' and radical change on GTCs sub degree programmes? • Does the Government student grant/loan scheme encourage students to follow a TVET qualification route?
2. How can Botswana GTCs compete effectively within this new TET market?	<ul style="list-style-type: none"> • Are there TVET qualification progression routes to H.E? • What are the apprenticeship opportunities? • What are the staffing and resourcing arrangements in Government Technical Colleges? • How is the Botswana Technical Education Programme performing within the new market climate?

Table 1. Research Sub Questions

reviewing the research questions, I propose sub-questions as shown in Table 1. From these sub-questions, four methods were selected to collect evidence. These

were; relevant literature to the Botswana case study, evaluation of national and departmental statistics, student questionnaires, and senior staff interviews. In this way, there will be a minimum of two data sources for any outcomes giving greater validity. The first question deals with the ontology in establishing the nature of reality. The triangulation using a variety of sources provides the epistemology of how I will know what is true, and the sub-questions suggest the methodology of how they will be answered. The qualities of a good case study are insight and survive in a curious methodological limbo according to Gerring, (2007, p. 7). The basic criteria of a case study described by Sarantakos, suggests that it should be;

- conducted in natural settings
- suitable for pursuing an in-depth analysis
- studied in whole units not aspects of units
- entails a single case or a few cases only
- studies typical cases
- perceives respondents as experts, not as sources of data
- employs many and diverse methods
- employs several sources of information.

The research cannot be based purely on a fixed design due to the nature of the research. The early findings necessitated changes in methods and direction in seeking answers to the questions posed. The research, therefore, uses a mixed method, semi-flexible approach, through a combination of desk research and fieldwork.

I now look at my evidence gathering tools to present how these were used in this research.

Data Collection Methods

National and Departmental Statistics

DTVET national statistics will be examined to establish the trends and the impact that the TET market is having on GTCs. In many ways the statistics will help to respond to questions 1 and 2 by providing a clear picture of what is taking place in GTCs with regards to student enrolment, achievement, and retention as well as lecturer appointments, training and retention. From this I plan to show the ability of GTCs to compete within the TET market. National and institutional statistics are a valuable source of quantitative information provided that they can be validated as accurate and reliable, and are interpreted correctly. Due to working in Botswana for a number of years, it was evident that some of the early GTC statistics produced prior to 2000 were contestable and often they came into the public domain a number of years after the event, although this is gradually improving (Joint Annual Appraisal Team , 2008). What I suggest is that at times early TVET statistics presented rather a generous view of reality which resulted from using a common methodology to cover all education levels, which is not appropriate for the TVET sector as I will show. In 2001 I was requested by the director of DVET to look at statistics in GTCs, to propose an improved system of monitoring data, with the purpose of establishing accurate and valid statistical records at each institution and then a process to combine these into the DVET national statistical returns. At that time, GTCs would be requested for statistical information annually and no institutions or DVET retained their data for planning or record keeping purposes. From 2002 to 2008 GTCs were trained to maintain spreadsheets on student/course and teaching staff data. These were then audited each term to check that the records were accurate and valid. In the early years, there were errors; missing student groups and gender errors. These were corrected and rectified during the audit visit to establish accurate and valid termly statistics. Gradually the institutional statistics produced, became tools that enabled GTC senior management teams to plan more effectively and to set targets for improvement. Staff shortages at DTVET from the end of 2008 prevented the institutional audit visit of statistical data, such that point on data is perhaps less reliable, but nevertheless provides a continuation of trends from which to draw some conclusions. I will look at student statistics in some detail as they are a significant factor in this research given the declining number of students. In Appendix 5, I show the statistical calculation methodology and terminology introduced in 2001 to establish students and staff utilisation data.

Human Resource Data

Human Resource (HR) data has always been challenging in the MoESD/DTVET as the personnel computer database was rarely maintained and failed to keep track of staff transfers between institutions. So it can only provide a base number of the permanent staff. Due to this when I commenced the collection of student data in 2001 I also requested GTCs to record lecturing staff, such that these returns provide a greater accuracy of available teaching staff and their contract hours, which is essential for calculating the student staff ratio. I will review lecturers/teaching staff separately to student data, due to its critical importance in the delivery of TVET in GTCs. I will also be investigating how government policies may be impacting lecturing staff in GTCs in connection with the planned expansion of TVET and proposed full utilisation, together with their planned takeover of the community Brigades by the MoESD. It is worth noting that Brigade statistics are rarely audited due to man power shortages. DTVET pay Brigades per student according to their own submissions which therefore cannot be confirmed as an accurate representation of reality.

Teaching staff numbers at the GTCs, as we will see from the research, change each term. This is because HR is largely managed centrally, and staff can be moved anywhere in the system as vacancies or higher level posts become available. In fact some of the non-teaching posts come under different government ministries (e.g. library, supplies, administrative staff.) which make it extremely challenging for GTCs to manage, as often no reference to staff changes or promotions are notified to College Principals (College Principals Minutes). Teaching staff are appointed on scales similar to the 1990's English lecturer system of; lecturer 1, lecturer 2, senior lecturer. For each of these grades, the amount of management and administrative duties result in reduced teaching timetables. It is, therefore, essential to quantify teaching contact hours available as it has a huge impact on teaching specific programmes. This together with part time and short term contract teachers will be explored in the research, to establish a clear picture of what is happening in GTCs.

Student Questionnaire

The Student Questionnaire was developed from the sub research questions attempting to establish the type of students accessing GTCs, their preferences for education and training and views on the training being received. It followed the guidelines suggested by Robinson, (2002) and Sarantakos, (2005) and uses closed questions to encourage responses. Some open questions were used, and these do provide some helpful students comments which have been used to illustrate some of the key points in this research. While conducting the semi-structured staff interviews

in Botswana, new knowledge was established which made it necessary to make changes to the questionnaire. These were:

- All BTEP students including foundation level had since May 2010 now been considered under the GLS (Int1). The new Minister of MoESD did this in recognition of the importance of TVET, and the development of technicians for the economy (Int1) following reported falling GTC student numbers and losses to the private sector
- A visit to the Botswana Examinations Council also established that they were unable to extract data from the Botswana General Certificate Secondary Education (BGCSE) examinations on individual student achievement unless a candidate number was identified and even this would be challenging and take time. Consequently, it was deemed best to ask students what their examination results were. From this, it was anticipated that the system of points used for access to higher education and the GLS could be calculated to establish a GTC student profile. Clearly the reliability of these results would be questionable but this will be considered during the questionnaire data analysis.

The questionnaire was tested on a sample ICT class at Gaborone and then again adjusted before being conducted in two GTCs to ensure simplicity of questions and to obtain high completion rates. In 2010, Botswana had eight GTCs spread around the country although one had only recently opened, and another had yet to open. Time constraints prevented conducting a survey across all the GTCs, due to the distances involved and my limited time in Botswana. Two GTCs were selected as representative; Gaborone GTC, because they offer the broadest selection of BTEP qualifications including BTEP advanced level. Jwaneng GTC is smaller with limited hostel accommodation, possibly drawing more of their students from the local vicinity and running BTEP foundation level which is not the case at Gaborone. To some extent GTCs have very similar student profiles, as GTC admission policies are common and can take students from anywhere in the country which will be shown from the questionnaire results.

I considered a survey using the internet which might have given greater coverage across all the GTCs, however, a Botswana internet student survey in the reviewed literature; suggested a very poor response (Botswana Evaluation Services Team, 2009, pp. 18, 6.3.2) such that this was discounted. For this reason I considered it best to distribute and collect the questionnaires myself to ensure a timely response and an adequate sample. I visited both GTCs and met with the College Principals in both cases, who agreed to the survey being conducted and both suggested that it would be better for me to visit classes and distribute the questionnaire personally. The Principals considered that this would maximise returns in the shortest possible

time. Although the main focus was on BTEP, all students were surveyed which enabled some comparison across programmes. The survey was carried out at Jwaneng on 8/11/2010 and Gaborone on 9/11/2010. Prior to the completion of the questionnaires all students were briefed on the purpose of the questionnaire and the research that was being undertaken.

The questionnaire is shown in Appendix 3. It was explained that the completion of the questionnaire was voluntary and confidential and that any comments made would not be attributed to any individuals. A total of 206 questionnaires were completed compared to the 281 statistically recorded for the third term 2010. This is 73.3% of students registered at the two GTCs suggesting the findings would be representative of the two institutions and fairly indicative of GTCs as a whole for the reasons given earlier.

All the students met were enthusiastic to take part that demonstrates the value of visiting each institution and class personally. Table 2 shows the student numbers

Research Statistical Analysis				
Gaborone Technical College	Male	Female	Total	Records
BTEP Cert in Beauty Therapy	4	21	25	32 (3/20)
BTEP Cert in Travel & Tourism	6	17	23	32(12/20)
BTEP Advanced Cert in Engineering	4	6	10	10 (4/6)
BTEP Cert in Building Construction	8	4	12	13 (9/4)
BTEP Cert in Multimedia	12	7	19	30 (19/11)
BTEP Advanced Cert in ICT	7	6	13	16 (10/6)
NCC Electrical Installation	5		5	16 (14/2)
NCC Plumbing & Pipe Fitting	4	3	7	15 (11/4)
Sub Total	50	64	114	164
Jwaneng Technical College	Male	Female	Total	Records
BTEP Foundation in Business	2	12	14	16 (6/10)
BTEP Foundation in EME	13	1	14	16 (14/2)
BTEP Cert in CDT	2	10	12	14 (2/14)
NCC in Secretarial Studies	6	9	15	16 (6/10)
NCC in Accounting & Business	2	8	10	16 (6/10)
NCC Electrical Engineering	4		4	15 (13/2)
NCC in Bricklaying and Plastering	9	2	11	12 (11/1)
NCC in Painting & Decorating	4	8	12	12 (4/8)
Sub Total	42	50	92	117
Total	92	114	206	281

Table 2: Courses Surveyed with the Student Questionnaire

who completed the questionnaire and the variation from those registered on the course records. This suggests that either not all the students as recorded in the institutional statistics were attending that day or perhaps were carrying out other activities off campus. Some of the student numbers surveyed do not correspond with the institutional

statistics submitted to DTVET (e.g. Gaborone BTEP Certificate in Beauty, and in Jwaneng, BTEP Foundation in Business; and NCC Painting and Decorating). This shows from the completed questionnaires more males or females than nationally recorded. Although these errors are not significant, they are typical of errors found in auditing GTC data during 2002 to 2007. They suggest that as limited auditing of

data has occurred due to staff shortages that errors in reporting statistics are creeping back. It is also a strong reminder of the continued need to verify regularly and validate college statistical records each term, before entering them into national statistics. Initially, all the student questionnaires were entered into the database and then checks made to correct errors found. On question four, a number of the village locations had incorrect spellings, although apparently locally there is some disagreement of place names (Majelatlé, 2012). These were corrected according to the 2011 Botswana Population and Housing Census Report. On question twelve, some additional BGCSE's that were not listed were recorded by students and these were added to the results. A majority of students completed the BGCSE results section, but I suspect that some of these were JC results. These were identified where no senior secondary school was given and so were subsequently eliminated from the analysis of BGCSE results. Some students did not indicate the correct course name, but this was corrected by college records and other students on the same course.

Where BGCSE results are given, it was not possible to verify these from the Examinations Council as originally planned. Accessing their database was problematic, so some care needs to be taken with the interpretation of this data. The Tertiary Financing Department informed me that they had a similar problem with checking student results and subsequently were planning to have a direct link to the Examinations Council database in the future (Int4). Nil responses were minimal and therefore not included in percentage totals. Results were analysed by qualification programme, then by the institution and finally totalled to identify areas of significance.

Staff Interviews

Robson (2002 p. 271) shows a chart extracted from the work of King (1994 pp.16-17) with five statements of where qualitative interviews are applicable, and they apply to the interviews planned in this research. I have selected the fifth one as particularly pertinent and representative that states that qualitative research interviews are most appropriate;

'Where a quantitative study has been carried out, and qualitative data are required to validate particular measures or to clarify and illustrate the meaning of the findings'.

In developing the process of interviewing, I followed the principles suggested by Robinson, (2002) and Sarantakos, (2005), which provide helpful guidance on

question preparation, delivery technique and structure. Robson, (2002, p. 270) suggests three common types and styles of interview; fully structured, semi-structured and unstructured although Sarandakos, (2005, p. 269) expands these to many other specific types of interview. I chose to use semi-structured to open-structured interviews as the interviewees were managers, and I was keen to illicit individual responses to the organisational changes linked to the marketization of the TET and TVET.

The interviews took place over a three-week period during September and November 2010, which enabled the collection of personal views and factual information at that time on the Botswana education and training reforms. The people selected for interview were 13 directors or designated senior managers within the government ministries and parastatal organisations at the highest levels that were interconnected with the reforms. At QAA and the Internship programme two senior managers wished to be interviewed at the same time and these are shown in the table below. Where a number are from the same ministry, I have shown the department or institution. The references shown in the text are coded Int1... Int13 providing some anonymity. The government of Botswana, ministries and parastatals are small such that the post titles indicate clearly who was interviewed to those within Botswana. Individual letters were written to each government ministry, departments or parastatals as requested from the general research permission granted by the MoESD (See Appendix 1). The ministries provided some guidance in who to contact for interview. Table 3 shows the list of those interviewed, their designation and the date of the interview together with the ministry, department or parastatal organisation where they were working.

Ministry or Parastatal Organisation	Date of interview
MoESD/Department of Technical Vocational Education & Training (DTVET) Head Quarters (Director)	23/09/2010
MoESD/DTVET/HQ (Chief Education Officer)	23/09/2010
Botswana Training Authority (BOTA) Director of Standards Development <i>(The Chief Executive Officer of BOTA was met but recommended the Director of Standards Development as the best person to interview.)</i>	27/09/2010
MLHA/Graduate Internship (Director and Chief Intern Officer)	7/10/2010
MLHA/ MTTC (Acting Director <i>(The Director was out of the country during the field research period)</i>)	7/10/2010
Tertiary Education Financing (Deputy Director of Student Placement and Welfare as delegated by the Director.)	2/11/2010
MoESD/DTVET/ Gaborone Technical College (GTC) Deputy Principal	3/11/2010

(The Principal was unavailable)	
MoESD/DTVET/ Botswana College of Engineering Technology (BCET). <i>The Principal at BCET was only familiar with the University technician qualifications so the deputy was the most informed and therefore interviewed)</i>	4/11/2010
MoESD/DTVET/HQ Programme design and development (PDD) (Principal Technical Officer 1)	4/11/2010
MLHA/ Construction Industries Trust Fund (CITF) (Executive Director)	5/11/2010
Tertiary Education Council (TEC) (Executive Secretary of the TEC)	5/11/2010
MoESD/DTVET/HQ (Policy) (Principal Education Officer 1)	5/11/2010
MoESD/QAA (BTEP Qualification Body) (Director and Senior Manager)	5/11/2010

Table 3: Senior Staff Interviewed

The interviews were all recorded with the agreement of the participants and then transcribed to gather the responses word for word as recommended by Robson, (2002, p. 277) and are shown in Appendix 2. This provided accuracy and context, reducing the likelihood of misinterpreting responses or being selective in what I recalled. The order of the interviews was dictated by the arrangements made either directly by telephone or through the senior manager's secretary.

Before the interviews, I prepared a list of generally open questions based on the research questions so that I could maintain some consistency. I selected questions appropriate to the interviewees varying roles and responsibilities. Sometimes a response would require me to ask further questions to probe reasoning or to test the working hypothesis that was emerging. In reality, it was not always possible to follow the questions exactly as prepared, but they did provide a checklist for the research coverage. Some of the interviews were with people that I had worked with previously, so were perhaps willing to be much more open or made comments such as, 'well as you know I am'. Those who I had not met before were happier to follow my pre-arranged questions, which were provided prior to each interview. Responses varied from information and fact to the expression of personal views, which are used qualitatively to illustrate research findings. Sarantakos, (2005, p. 286/7) provided a helpful checklist of problems and errors in interviewing and were considered during the analysis and writing up of responses.

The basic problem, which is common to many case studies, is reducing the amount of data or refining the data relevant to the research questions (Swanbon, 2010). Following the transcription of the interviews, I collated key statements from each interview in a spreadsheet format (Appendix 2). The interview statements were then gathered against the key headings whilst maintaining the interviewee reference.

This took a number of filtering processes. Finally, I prepared the staff interview section of this thesis under key headings related to the research questions, careful to cross check to ensure the accuracy and that statements were not taken out of context. The interviews were then coded for writing up the interview response section in this research, (Int1), (Int2), (Int3)

The interviews are focused on individuals connected with the TET changes that were impacting GTCs and the BTEP qualifications. For this reason industry and business were not interviewed. Their views on TVET have been previously surveyed in a number of the reports reviewed in this research. I suggest that the views of industry and business on the TET changes could be considered at a future date and perhaps using the findings from this research.

Data Analysis

Inevitably in a case study of this nature there is substantial information and data to analyse and filter. Sarantakos, (2005) provides a helpful list of the strengths and weaknesses of the different document review and analysis methods which I found helpful. I also found Wallace and Poulson's (2003) critical reading for self critical writing helpful as I reviewed various texts and documents related to the Botswana case study. I was particularly surprised that some of the reports written on Botswana contained contestable data and statistics which I was probably more aware of from my engineering background and past experience working in Botswana. It indicated the need to be very careful when using single sources although I noticed that sometimes these single sources had been referenced in other documents giving a perhaps an undeserved legitimacy. The Botswana tertiary market has resulted from a wide range of radical government educational change which inevitably required investigating and presenting in a coherent manner to the reader to make sense of the factors influencing GTCs and the BTEP qualification. This proved challenging as many of the participants in the change process interviewed had different views on the tertiary system and the factors which were influencing GTCs. The senior staff interviews were recorded for accuracy but this provided a vast amount of information once transcribed which required substantial reduction to identify the relevant factors related to the research questions. On reflection this could have been reduced by narrowing the research questions but typically this only became more apparent as the research progressed. I think that my personal interest in Botswana has made it difficult to remain completely focused having a passionate interest in the complexity and detail of this case study. The statistical research on student numbers, staffing and institutional usage proved helpful in identifying that for GTCs to be successful and utilise their facilities will require greater institutional autonomy to use their skill and creative ability in maximising resources effectively. The student questionnaire analysis provided encouraging indications that TVET could improve its image if its graduates gain employment as a result of the greater practical application within their programmes of study.

Research Strengths and Weakness

Reliabilities

Gerring, (2007) in discussing the reliability of research suggests the value of process tracing. This can apply to both quantitative and qualitative research. As a result, I have endeavoured to cross check my evidence strands in an attempt to confirm truth or perception. There is a range of opinions and views expressed about Botswana vocational qualifications, resulting from the literature review and senior staff interviews which I present in this research. Where I believe there is misunderstanding, I have drawn from other evidence strands to indicate this. The senior staff interviews provided helpful interpretative responses and useful information, but all needed to be checked out against the reality as opinion was not always factually correct. Nevertheless opinion is still valuable in identifying where attitudes or perceptions may need to be changed.

Validity

Validity is, 'a property of a research instrument which measures its relevance, precision and accuracy' (Sarantakos, 2005). Gerring, (2007) in relation to Case studies suggests that the validity refers to the correctness of the hypothesis with respect to the sample and its representativeness. Being aware of the threats to validity help to reduce interpretation and description errors according to Robson, (2002, p. 171). For this reason, I state my background and interests so there can be no hidden personal influences. Inevitably how data is selected and presented can never be completely free of bias, but in the cross checking quantitative data with qualitative interview outcomes I have attempted to reduce this to a minimum. In recording and transcribing the qualitative interviews, this will have also reduced bias, although I do recognise that in selecting illustrative interview comments, this could be seen to be supporting a particular position or picture (Sarantakos, 2005). For this reason, I was careful to cross check interview comment extractions continually to ensure the context was maintained. Providing the interview transcripts and their tabular summation in Appendix 2, does provide a degree of transparency that any reader is free to check, if they believe I have incorrectly recorded or distorted any particular interviewee statement.

I have stated that the interviewee in this research are all very senior staff and policy makers such that care was needed to provide the appropriate politeness, deference and respect. To get beneath the surface of the official line highly specific and informed questions were used (Walford, 1994). Almost all those interviewed were

prepared to give their views and were unfettered by bureaucratic party lines that might occur in more westernised countries.

Ethics

I am committed to following the BERA guidelines (BERA, 2004) in this research. Letters requesting permission to conduct the research in Botswana can be seen in Appendix 1. The first letter to Botswana requested research permission through the Presidential office to the MoESD. This was approved, but suggested seeking permission from each department and parastatal individually (See Appendix 1).

At each of the senior staff interviews, I provided an outline of the research and the questions that I would be asking. Prior to commencing each interview, I presented a brief outline of the research and gave assurance on the confidentiality of the interview and for this reason I have not indicated which interview is related to which interviewee. All interviewee names and quoted names during interviews were removed from the transcripts. Individual codes were used for each interview to ensure some confidentiality and to track sources to ensure the accuracy. It is possible from some of the interviews to recognise various government departments and parastatal organisations from the factual information given. However, interview comments should be seen as personal viewpoints at that point in time. These views may have changed since the interview as the reform process in Botswana continues.

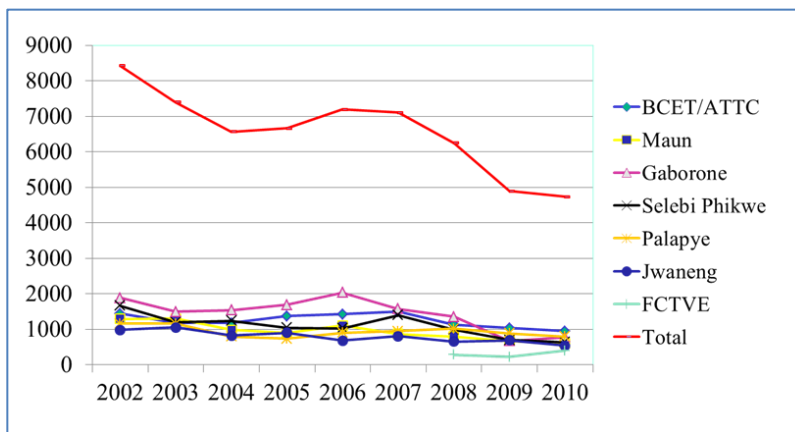
Chapter Six: Research Findings

In this chapter I present the finding of the three research strands shown below

1. An examination of statistical data
2. The senior staff Interviews response results
3. The student questionnaire results

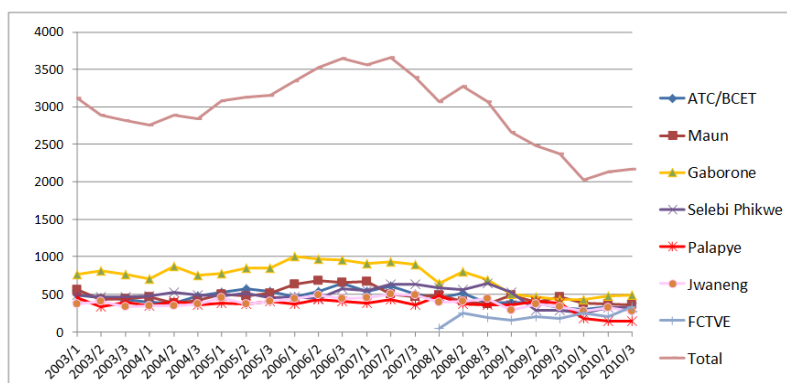
Department of Technical Vocational Education and Training Statistics

As described earlier in this research, statistics are valuable sources of information from which to begin investigating. However, care is needed to ensure that the data is reliable, accurate and valid and is interpreted correctly so as to establish trends. The trends in turn can be explored for the reasons why. From this, it is possible to identify causes and then strategies or targets for the future. In Graph 4, it shows the



Graph 4: Total Student Numbers Attending GTCs per Year (DTVET Statistics 2008 + 2009/2010 Morris 2010)

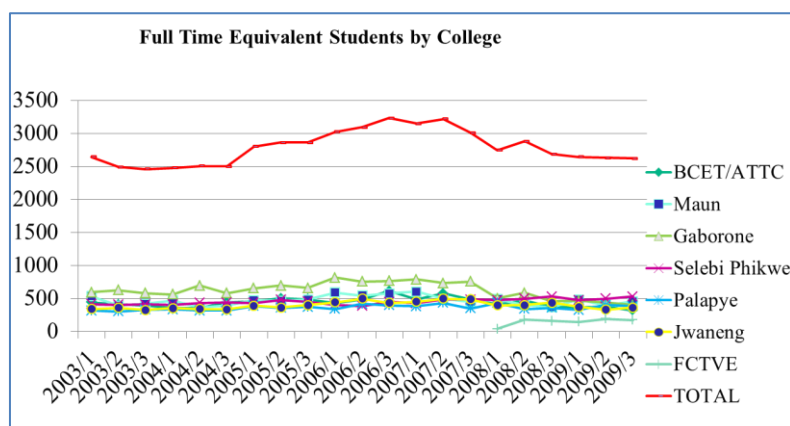
overall student numbers attending GTCs from 2002 to 2010. The trend indicates falling numbers from 2002 to 2004; then rising slightly till 2007 and then falling again although the fall from 2009 to 2010 is less dramatic. From the chart, it can be seen that in 2002, 8,400 students were attending six GTCs and that in 2008; an additional new GTC opened called Francistown College of Technical and Vocational Education



Graph 5: Total Student Numbers Attending GTCs per Term. (DTVET Statistics 2010)

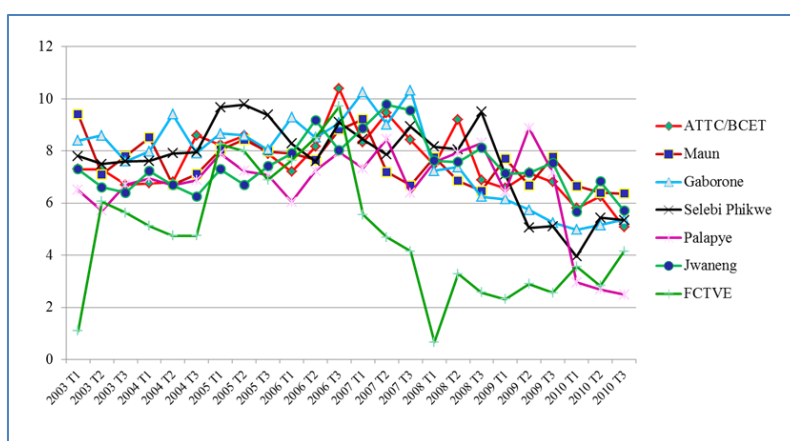
(FCTVE). So why the falls and rises in student numbers? Why is there what appears to be almost half the number of students attending in 2010 than in 2002, despite opening of a new institution in 2008? Looking in more detail; Graph 5 shows the same data, but for each term. Although a similar shape to the first graph it now rises to its highest point in 2006/7. From this, we can see that student numbers are changing each term, but compared to Graph 3 it shows less than half the number of students around 3,000. The issue is that prior to 2001 nearly all the delivery in GTCs were the NCC qualification together with some evening classes each term. NCC students, as I have shown earlier, only attend GTCs for one term each year such that each term has different students attending. The BTEP qualification was launched in 2001 and is a full-time qualification. As more full-time courses are run so the overall number of students drops. To gain the total number of students attending GTCs prior to the year 2000, the students attending each term were simply added together (T1 +T2 +T3). Thus, if you had 3,000 students each term it would total 9,000 students. At one time GTCs experimented with a four term year, so student numbers, if they were calculated on this basis would be x4 (*12,000 students*). Some NCC students who were not employed attended for periods longer than one term (*Year 1 NCC students for the whole year*) but no account was taken of this, resulting in double or triple counting some students prior to 2000. Not only can the wrong statistical calculation method produce inflated student numbers but if used to calculate the cost per student it could distort reality. In 2000 when I reviewed past published DTVET statistics, they were clearly contestable, particularly as no audit was done at each GTC, relying only on the numbers submitted by each college. Additionally no GTC retained their statistical data and examination results, such that they were unable to recognise if their institution was improving or declining in performance. Annual and termly statistics are a valuable planning and reviewing tool, which can provide measures of how well institutions are using their resources and also the opportunity to set future performance targets, providing they follow a commonly agreed approach and are valid. In 2001 I was asked to present a more accurate method of calculating GTC student statistical returns and this paper is shown in Appendix 5. It shows in detail how the various statistical calculations are made and how to establish a full-time student equivalent (FTE) value. The definition of an FTE student is one who had attended a GTC for 40 weeks per year and had a minimum of 21 hours of staff contact per week (840hours per annum). In this way, a student only attending for one term would be counted in FTEs as 1/3. In Graph 6, we can see students per term by FTE. This shows that although there is a similarity to the first two graphs,

the curves are less pronounced. The FTE student calculation enables the possibility of looking at the utilisation of GTC facilities, but to do this we also need to look at the teaching staff and physical space available. Using this statistic it can show us how much of an institutions facilities are being used, particularly if we work out student FTE and the number of FTE teaching staff available.



Graph 6: Full Time Equivalent GTC student numbers by term. (DTVET Statistics 2010)

GTC lecturers, or teachers as I refer to them, have different levels of teaching contact requirements according to their grades and so cannot be simply added together. Some GTCs also employ part-time teaching staff, and these also need to be included in any calculation of a Teaching FTE. A Student-Staff Ratio (SSR) can then be established by dividing the student FTE figure by the teaching staff FTE which can be seen in Graph 7.

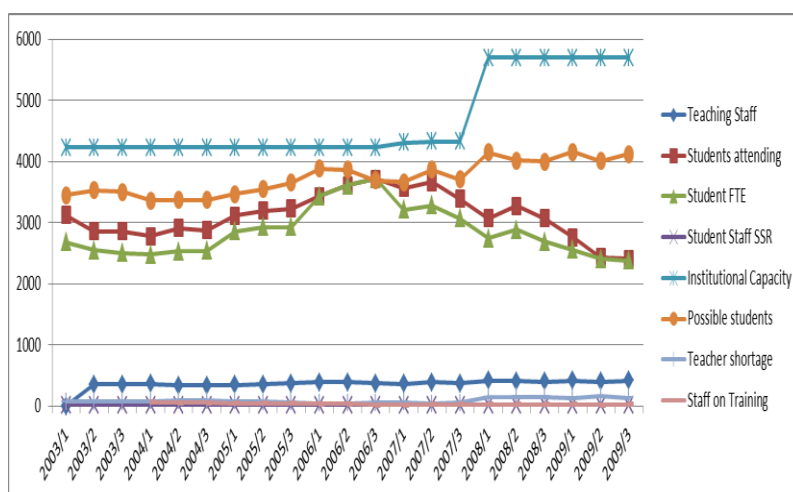


Graph 7: GTC Student Staff Ratio by Term (DTVET statistics 2010)

From this graph, you can see the ratio fluctuating from just above 10 to as low as 1. This indicates that in some cases there are on average 10 students to every member of teaching staff (10:1) down to as low as 1 student to 1 member of staff (1:1). The rather strange lower line on the graph is due to FCTVE being included, when they were based in Gaborone and starting a teacher training course for the new BTEP qualification. At that time they had a very low student/ teacher ratio,

which rises up and down as new lecturers were appointed. It starts to improve once it is moved to the new GTC in Francistown where BTEP qualifications are starting to be run. Earlier we saw that teacher training in Botswana was an extremely high cost area, due to low SSRs and the same applies here within GTCs. I have indicated already that in TVET it is difficult to achieve high student staff ratio's due to the practical nature of the teaching and health and safety factors. Now some courses can have higher student numbers, such as Business and IT programmes, providing you have the classroom sizes to accommodate. We of course should also recognise that these figures are only indicators and that teaching staff need to have the required specialisms, such that a GTC could have a low SSR if they have the right number of teaching staff available but with the wrong teaching specialism. So it is critical to ask the right questions when looking at statistics to establish a true and clear picture of the reality behind the graph.

In 2003, the Director of DVET at that time set a target of 10 students to each member of teaching staff⁷. There had been a steady improvement from that time and some GTCs made the target during 2006/7, so this was not impossible (Graph 6). Planning to utilise fully the teaching staff available is a critical role for any educational/training management. Launching the BTEP qualification enabled DTVET to have more control on course student numbers as generally 16/18 students are recruited. With NCC courses, GTCs are dependent on what students MTTC will send, and this is unpredictable. Where GTCs have a teacher shortage in

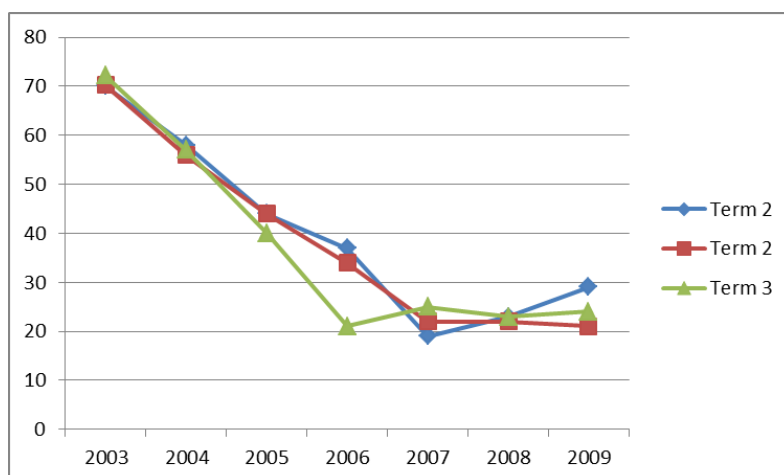


Graph 8: Comparison of Government Technical College statistical data (Morris 2010 constructed from DTVET statistics)

the short term due to sickness or transfer to another institution, they were able to appoint a part time teacher. This would enable programmes to continue to run to

⁷ Teaching staff did not include the principal or deputy principal as they have non-teaching roles

meet the needs of students recruited. Where staff were light on their timetable, it was possible for GTC managers to arrange for them to teach short courses or evening classes, thus maximising the GTC human resources. Maintaining or achieving an SSR of 10:1 proved challenging for GTCs. Improvements were made, but there has been a gradual deterioration due to a number of factors that I will explain. Graph 8 shows a number of DTVET statistics; the top line in the graph indicates the overall GTC institutional physical student capacity which remains fairly steady until the end of 2007 when the new college in Francistown opened⁸. The next line on the graph is the possible student numbers if the GTCs had managed to teach with an SSR of 10:1. Below this, the actual student FTEs are shown. Towards the bottom of the graph, I have shown the number of teachers available, which appears fairly constant despite a new institution opening at the end of 2007 and another in 2011 planned to open (Oodi). At the bottom of the chart are shown the staff on training and the teacher shortages together with the SSR. From GTC spread sheets, teaching staff available vary from term to term, and there is no consistency. Secondly between 2003 and 2009 the total increase in teaching staff is around 50, despite opening the new college in Francistown and expanding facilities at Gaborone and BCET. Thirdly staff on training in 2009 (Graph 9), are less than half the number training in 2003, such that the overall increase in real teaching staff



Graph 9: GTC teachers on training from GTCs (Drawn from DTVET statistics Morris 2010)

available is only 20, as these were not counted in overall teaching staff numbers while on training. So clearly, there are insufficient teachers for the GTCs to achieve anywhere near the maximum usage of facilities available and planned to come online from 2011. The statistics show that, staff shortages are not a new

⁸ It is important to recognise here that a new college cannot run at full capacity in the first year but increases year on year as student progress to the next level and new students are recruited.

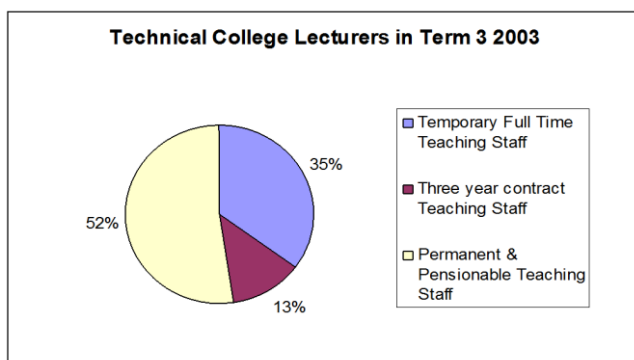
phenomenon, but have become progressively worse with the expansion of physical resources and new GTCs constructed.

To look in more detail at the teaching staff in GTCs, I have divided the issues into key factors impacting the teaching staff shortages as it is not just about recruitment. These have already been illustrated in the results of senior staff interviews, but some are worth reiterating again and adding additional information that I will explain in more detail.

The Loss of Temporary Full Time Staff Contracts

As indicated earlier GTCs always had the ability to appoint what they call Temporary Full Time Staff (TFTS) to teach where they had a shortage due to staff on long-term sick, or on training or to teach a specialist subject that the permanent teachers could not provide (Gabaratane, et al., 2004). A report in 2004 provides a detailed statistical analysis of TFTS in 2003 and the extent to which they were being used at that time.

In 2004 at the request of the Director of DVET the GTC Principals were asked to undertake research regarding teaching staff. In particular, concerns had been rising over a number of years, regarding the number of TFTS. The investigation stated that the vast majority of TFTS were lecturing/teaching staff, which numbered over one



Graph 10: Technical College Lecturers 2003
(Gabaratane, Mmopi, Morris and Morris 2004, p. 6)

third of lecturers (Graph 9), who were playing a significant part in teaching at that time of over seven thousand students per year in GTCs (Department of Vocational Education & Training, 2004). Additionally another 13% of lecturing staff were on three-year contracts; the majority of which were from other Sub-Saharan Countries. This shows that only 52% of lecturers were citizen full-time and permanent employees. The report stated that with the planned physical expansion of resources to accommodate more students, the total number of lecturing staff would need to increase to approximately 800 from the existing 335 posts at that time. In summary, the findings indicated that:

- Levels of TFTS had reached critical levels in GTCs where in some departments 70% were TFTS. This was making it difficult for colleges to plan long term and meet the quality standards required for the delivery of BTEP
- In some cases TFTS had been employed annually for up to eight years, which made them eligible for severance pay according to national labour laws, but which no GTC or DVET had taken into account
- TFTS were providing good service, but the issue was over the continuity of service and the need to re-advertise for the same posts every year
- GTCs reported that there were regular delays in appointing and assigning permanent posts (*over a year was seen as normal*) and that the curriculum programme (*both NCC and BTEP*) could not be delivered without relying on large numbers of TFTS.

The numbers of lecturing staff reported on study leave at that time were reported as 48 and a vacancy rate for permanent lecturing staff of 31. This all presented a major challenge to the MoE, particularly with the planned expansion of the system and the planned expansion of BTEP qualifications across new curriculum areas. Although TFTS did provide the GTCs with a short term solution to teaching the new BTEP qualifications, but all too often these staff were needed every year to compensate for staff on training and also to compensate for the general lecturer shortages.

One of the positive benefits of the TFTS highlighted in the report showed that many were qualified to a higher level than citizen staff, had good industrial experience and were very willing to be flexible in teaching evening classes and short courses. This enabled GTCs to schedule a wider range of programmes for the community and maximise the available institutional resources. GTC Principals recommended that identified TFTS should be placed on three-year contracts similar to other expatriate lecturers from Zambia, Zimbabwe and Kenya at that time, to provide some stability to the system but this was never achieved. Clearly there needed to be a balance between the numbers of full-time staff and the proportion of TFTS that are required to supplement staff sickness, staff training and staff losses. The 2003 statistical review also established that some GTC departments were too heavily dependent on TFTS, which was clearly unhelpful for building up long-term institutional expertise and management.

To fund the TFTS, GTCs were enabled to retain money generated from running evening classes and short courses such that TFTS were of little additional cost to

the system. The only cost not considered was severance pay for those TFTS continually employed year after year (up to eight years in one case).

Regrettably, by 2008 in response to this review, Ministry Human Resource Division decided to return all appointments back centrally, giving no ability for GTC managements to appoint part-time staff where any shortages occurred, as reported in the interviews (Int9) (Int10) This effectively eliminated out a valuable resource to support the running of programmes in GTCs. The money generated from short courses was also requested to be returned directly to the Ministry of Finance, thus removing any incentive to GTCs to run short courses and evening classes.

Staff Training

DTVET have had a substantial staff development budget over the last decade which has enabled many low qualified teaching staff to gain higher qualifications, which is encouraging and reported on in the literature review. Numbers of lecturers on training were shown earlier in Graph 8. This indicates that in 2003, there were 70 studying at that time for higher qualifications. The number of lecturers on training then drops steadily as the budget is spent, until, in 2010, fewer than 30 lecturers were on study leave.

Lecturers were offered opportunities to increase their industry or business experience within their vocational specialism, during my time in DTVET, but hardly any lecturers took this opportunity, preferring to upgrade their qualifications, as this would increase salary and promotion prospects. Industrial experience provides no financial incentive and is less attractive status wise, although it would have greatly increased the quality of the training provided by the lecturers, many of whom had little to no industrial background.

Staff Recruitment

I have shown that DTVET regularly submitted manpower submission for new staff. The statistics tend to suggest that no real increase in lecturer numbers has been achieved over an eight-year period. New citizen lecturer appointments have merely replaced the existing TFTS, and the three year contracted expatriate appointments.

In 2007 DVET submitted its annual manpower requirements for 2008/2009, which warned that if new posts were not made available, then colleges would have to close courses and the department would not be able to achieve its delegated responsibilities (Department of Vocational Education and Training, 2007, p. 3). The manpower submission requested for 1,290 new posts to cover the approved GTC

expansion and the takeover of Brigades. Understandably the Ministry of Finance was shocked at the number of posts required, particularly as they were trying to limit civil service manpower growth. However, all of these posts were for government approved and planned initiatives and had been in the planning stages over a number of years. Now that reality had arrived it became clear that it was much easier to agree to invest in building new colleges and agree takeover of Brigades and transfer of courses from the University, than it was to recruit the required lecturers. DTVET has continued to have had a high vacancy rate and so GTCs are left with very low utilisation rates.

Recruitment of full-time teaching staff

There have been many attempts to improve GTC lecturer numbers over the last decade. DTVET have produced a number of reports to HR, but none has achieved a lasting solution. In 2001 – 2005 specialist lecturers from Kenya were recruited to teach some of the new BTEP qualifications where there were no Batswana available. These contracts lasted for three to five years but as it became the policy of Ministry HR to replace all the expatriate lecturers with citizens, numbers of expatriate staff in DTVET GTCs fell to 7.56% in 2007 (Department of Vocational Education and Training, 2007). During my research in 2010 they had eliminated almost all the expatriate labour, except those transferred from the University of Botswana to DTVET to teach their transferred sub-degree programmes.

Perhaps realising that it was impossible to fill posts without expatriate labour, HR management began looking again to other countries. I was informed that HR had spoken with Germany, India and Kenya. However, no senior DTVET staff had received any official feedback, so they had assumed that these enquiries were unsuccessful (Int11). In 2013 it was reported that Botswana had now signed a deal with Zimbabwe to assist in providing lecturing staff to GTCs (Kayawe, 2013) (Anon, 2013). This is ironic particularly as HR had refused to re-contract expatriate lecturers, who were already working in the GTCs, despite lobbying by their Principals (TC Principals minutes 2006) (Int11). Only time will tell if this new initiative is successful.

Lecturer Promotions

A number of lecturer salary improvement schemes were proposed by DVET but were turned down as not consistent with civil service pay scales and grades. It was suggested instead that DTVET apply for more senior level posts in this way raising salaries. With no other alternatives, DVET did increase the number of senior lecturer posts, but it did little to alleviate the staff shortages.

Reduction in Evening Classes

The final statistic worth looking at in this section is the part-time evening classes. They do provide a real chance for the communities around GTCs to update their skills and education. There was also the advantage of keeping the income and by rolling this over from year to year, could be used to pay TFTS or purchase resources. However, the ability of GTCs to retain the income generated was stopped in 2008 and so there has been a fall in evening classes and short courses. Additionally citizen lecturers are less inclined to work outside of traditional working hours in the evenings. By 2010, evening classes and short courses have virtually disappeared.

Statistics Conclusion

The statistics show that GTCs are unable to utilise their physical resources due to an acute shortage of lecturing staff and are therefore in a very poor position to compete within the TET market if money eventually follows students. Perhaps even more startling is that total lecturer numbers have achieved no overall increase over an eight-year period despite expanding facilities. This has resulted in spreading the existing lecturers across more institutions. On a positive note, almost all the lecturers are now citizens.

Student numbers have fallen due to losses to private institutions from 2007 but this has now been reduced with the inclusion of BTEP under the GLS. However student numbers have continued to fall for a variety of reasons which can be summarised as;

1. Centralised recruitment and promotion system that pay little regard to the programme delivery in GTCs.
2. Lecturer shortages due to the virtual elimination of TFTS and replacement with full time citizen staff.
3. Delays in curriculum development of BTEP.
4. Low numbers of students in some NCC trades delivered in too many institutions
5. Reduction of short courses and evening classes due to lack of incentives

The statistical findings are considered again in chapter seven under research discussion.

Staff Interview Response Results

Botswana has set a target of 50% of form 5 leavers to enter TET although no specific date has been set for this achievement. Planned projections show that by 2016, the school system will produce 53,000 exiting students. In 2009, 32,000 students sat the BGCSE examination at the end of form 5. The majority of students and parents in Botswana similar to the UK would prefer obtaining a degree rather than a vocational qualification. One senior manager's view was that,

'We are not going to change Botswana from a resource-based economy to a knowledge-based economy from artisans and technicians; you need high-level graduates' (Int8).

The interviewee however also stated,

'You can have too many academics and thinkers, and not enough doers; the problem that we are facing is quality (Int8).

I begin by looking at a new Graduate Internship Programme, which had been introduced due to the rising graduate unemployment. The view is that the academic progression route appears faster than the vocational route, but academic degree holders need to gain practical experience following their study to achieve employment. The rising graduate unemployment in Botswana is likely to increase as a higher percentage of form 5 leavers access the expanding TET market. As a result the type and structure of degree qualifications need close consideration, as employers argue that fresh graduates do not have the appropriate skills and knowledge for industry and business. As a result, the MLHA established a new department for Graduate Internship. The interviews tell more about this new initiative and the costs involved.

The Graduate Internship

The scheme commenced operation in November 2008 and the department to manage the scheme established the following February 2009. It was reported that currently degree holders from Botswana University are struggling to gain employment. In the past, almost every graduate was guaranteed employment as the civil service and economy expanded. One interviewee from the vocational sector questioned the value of acquiring more paper qualifications, and suggested that Botswana should move away from academic qualifications and look at competences. He stated;

'They have degrees, masters, doctorates, they've even got junior degree, diplomas and you name it, but they cannot perform, they do not have competences' (Int7).

Internships were initially placed in Public Service Departments (PSD) as it was difficult finding placements in the private sector. The purpose of the internship is to bridge the gap to meet the market needs of employers. No time limit has been set for the internship, although twelve months to two years depending on the experience required was considered normal. The government pays graduates an allowance of P2000 per month of which P1800 is paid to the graduate and P200 per month retained to provide an end of internship bonus, and from which any losses that might have been incurred by the graduate might be recovered i.e. theft, damage etc. It was stated that the internship was designed to improve the student work ethic, an issue which many employers have suggested needs to be rectified.

When asked if the training levy money collected by BOTA could be used to support the scheme, I was informed that this was intended only for artisan level, although some discussion has been taking place to use these funds at higher levels, as currently little has been accessed by industry for training purposes.

In 2010, there were 2,300 graduates in the scheme of which 90% were in PSDs. A budget of P63 million for 2010 had been set which did not include the administration costs. No formal evaluation of the scheme had taken place yet, although the department believed that it had improved graduate employment skills and enabled some to obtain employment. The scheme was anticipated to accommodate 3,000 graduates annually. The graduate scheme was also now supporting some graduate teachers as Botswana has been training too many teachers; a fact that was only recognised in 2006.

When asked if this work experience training scheme should now be under the MoESD rather than the MLHA, it was suggested,

'No the graduate work experience scheme is about empowering graduates similar to other government initiatives in assisting citizens in setting up businesses so should be under the MLHA (Int5).

Reforms and Organisational Change

There are many proposed reforms taking place within the Botswana education and training sector, and the interviews shed light on these changes, challenges and at times confusion that is being faced by the participants. Earlier I have shown that similar to many other countries Botswana has a Ministry of Labour and a Ministry of Education. In Botswana they are entitled, Ministry of Labour and Home Affairs

(MLHA) and recently renamed Ministry of Education and Skills Development (MoESD). Under the Organisation and Management Review (OMR) proposals, skills training, (the Apprenticeship scheme) was recommended to transfer to the MoESD. However, the interviews demonstrate, that policy decisions do not always materialise as planned. There is also an intention to reduce the size of government education and training departments by transferring sections to organisations with the parastatal status. For this reason, BOTA was moved from the MLHA because as one interviewee stated;

'BOTA was 'paralysed' while it was under the Ministry of Labour and Home Affairs' (Int8).

It was suggested that the problem with the MLHA was that they had little tradition of training and skills development despite having a responsibility through MTTC for the apprenticeship scheme. It was suggested that the MLHA was recognised more for settling disputes and employment-related activities. Subsequently it was proposed by 2012 to bring together the parastatal organisations of BOTA and TEC under a new structure called the Human Resource Development Council (HRDC). BOTA are proposed to be responsible for secondary level vocational training and the TEC would be responsible for diploma qualifications and above. The proposed merger would result in sections covering; budgeting and financing, planning and research development as well as workplace training services and quality assurance to maintain and raise education and training standards. Perhaps due to some of the controversies, the TEC proposed that MTTC should migrate to the Examinations Council such that it would then become a technical and examining wing of the NCC qualification. Regarding CITF, the TEC proposed that it should move to the HRDC and be entitled, 'Rapid Skills Development' with a responsibility to support non-graduates. The HRDC itself is anticipated to report to the government cabinet office through one of the existing ministries. At the time of this research it was proposed that this should be the MoESD, although indications were that the MLHA was not in favour of this.

Senior managers are not in unison with many of these reform proposals and it is likely that organisational structures will continue to evolve further over the next few years. The confusion for many of the system participants remains problematic, with uncertainties and lack of organisation clarity, due to the lack of agreement and a clearly communicated implementation plan.

I will now look at the various management organisations that have relevance to Botswana TVET and the impact that they are having on GTCs.

Botswana Training Authority (BOTA)

BOTA was originally set up as a parastatal organisation under the MLHA, with the principal objectives to coordinate vocational training activities, in order to achieve better integration and harmonisation of the vocational training system being developed. It was also given a role to monitor and evaluate the performance of the VET system, and provide advice on policy related issues. A key confusion which arose and continues, as shown from the interviewees, is the extent to where BOTA's responsibilities lie regarding GTC TVET programmes. There is no doubt that the apprenticeship NCC programme lay under BOTA's remit, but the BTEP qualification created problems progressing as it did to diploma level. BOTA believed their registration fees (P50) should cover all students up to diploma level in GTCs. BOTA also believed that their remit required that all GTC lecturers needed to register with them and pay registration fees as part of their mandate to become self-funding. Expatriate lecturers felt obligated to register and pay fees to retain their posts, but nearly all civil service appointed lecturers refused as they saw little advantage and could not be dismissed for not registering. They believed that if a registration fee were now required, then the government should pay this on their behalf through DTNET.

To further BOTA's self-funding mandate, a 2% industry levy system has been introduced. This was intended to encourage companies to carry out more training as they could recover some of their levy payments against approved training. In reality little additional training has resulted as one interviewee indicated;

'Yes this is one of the breakdowns... look only 646 companies have sent claims out of 8,000 companies (who paid the levy), that is only 2%, and some training is dubious' (Int3).

The companies that have carried out training under the levy scheme have been audited by BOTA but have often not always carried out useful training. Sometimes they have just done it to get their money back which raises the question of expansion of training under the levy system. The TEC has been talking to BOTA informally that they should perhaps consider expanding the scope of the levy to cover areas of training beyond their mandate, particularly as they have a low uptake of their industrial levy monies. BOTA normally consider diploma level to be above their remit although it was reported that they do finance some courses. This was a surprising comment considering that BOTA also believed that BTEP diploma level

was within their remit, and were requiring GTC students and lecturers to pay registration fees. This highlights the confusion over what it considered tertiary and what is considered vocational and secondary level.

The MTTC who manage the apprenticeship scheme expressed the belief that the levy system was beginning to make a difference in their area of training. It was suggested that the opportunities for companies to claim for training had not been widely recognised and that this was the reason little of the levy income had not be reimbursed to companies. It was suggested that once companies understood the process of claiming money from BOTA; then this might encourage more companies to take on apprentices and commit to training. Companies had expressed the view to MTTC that the cost of training apprentices was often lost as many left the company once they were qualified, but if the cost of this training could be claimed back from BOTA, then possibly more companies might consider recruiting and training apprentices.

The proposed rationalisation of MTTC and CITF

Under the OMR it was proposed to amalgamate the CITF with the MTTC, which had been approved by parliament and was just waiting for the implementation. The two organisations have related activities at artisan/craft level and are situated in Gaborone on adjacent sites, so this appears a logical proposal. More controversial was the proposal to place these organisations under the MoESD. There is logic in this proposal as some duplication of the provision is evident. An example was given that MTTC had just built a new training facility for hospitality, tourism, hairdressing and beauty therapy which replicates the provision of DTVET at Gaborone and Francistown GTCs. It was suggested that;

'This is a duplication and a waste of resources, and the left hand (MLHA) doesn't know what the right hand (MoESD) is doing (Int7).

Earlier I indicated that TEC was proposing that MTTC should move to the Examinations Council and the CITF to the new HRDC but this is contrary to other stakeholders understanding of the proposed changes. Clearly nothing has yet been finalised, and the debate continues.

Reform of the Apprenticeship scheme

The apprenticeship scheme was considered an internationally recognised and significant form of training and as such should be given more emphasis in

Botswana. Regrettably many students who were designated as apprentices had no employer sponsor, which has resulted as one interviewee put it;

‘A muddy system with Brigades doing the apprenticeship as well’ (Int3).

The lack of monitoring of the apprenticeship industrial component has resulted in poor quality placements, which were often unable to provide the appropriate practical experience, and this has led to a general decline in standards and recognition by industry. The apprenticeship curriculum has not been revised since its introduction in 1986⁹ and has many inconsistencies, old and redundant industrial practices, and lacks the provision of any IT component. There have been attempts to modernise the apprenticeship programme but there appears confusion on whose responsibility this is. The programme under MTTC now comes under the overarching body of BOTA (*Now an independent parastatal body*) although MTTC remains under the MLHA. BOTA believed that through their mandate of work based training; they will be able to run an effective apprenticeship programme. The reasons given for this view were that when the Germany completed their technical support for the NCC/apprenticeship programme, there was a lack of direction and MLHA/MTTC just focused on examinations, and forgot log books and monitoring apprentices in the workplace. BOTA were committed to bringing the workplace monitoring of apprentices back to its original form. MTTC argued that the weakness in monitoring and the issuing of apprentice log books to record activities had been hampered, due to a lack of human resources.

The EU began funding support for developing occupational standards in 2008 as the first stage of reforming the apprenticeship scheme, but this was reported as stalling due to lack of leadership and capable personnel. Contrastingly an MTTC spokesperson suggested that the reform of the apprenticeship scheme was still progressing, and was focused on revision of the NCC curriculum to transform it into a competency based programme, which should be completed by 2012. Industry was reported as engaged in this reform process by chairing the curriculum working sub-committees, and that steps have also been taken to improve the apprenticeship quality assurance processes, by printing more log books and raising examination pass marks. It was admitted however that MTTC were unable to achieve all that they would like but that this was due to staff shortages rather than an inability to manage the programme.

⁹ A revision of the NCC programme began in 2008 with EU funding support but little progress has been made due to staffing issues.

When questioned regarding employed and unemployed students on the NCC, it was stated that only employed students could progress all the way to the NCC qualification. Those not employed were restricted to progress to only trade certificates at levels C and B. Brigade students were intended to gain their practical skills through project work, and then trade testing is used to check achievement against the national standards. Those students who are unable to read and write are tested in the practical skills and gain some certification, but are unable to take any of the NCC theoretical examinations.

When asked if there may be some merit in separating employed apprentices from those students with no employer to give a more distinct qualification, it was suggested that this had not been thought of so far, but did sound something worth considering. MTTC had no plans to launch a technician or graduate apprenticeship although it was reported that some degree graduates had been taken on recently by companies, and were now doing the NCC artisan qualification. It was recognised, however that this did prevent new school leavers from achieving employment. It also reflects that employers will often recruit the highest qualified personnel, irrespective of the employment post requirements.

When asked about student numbers, it was reported that now MTTC had a backlog of applicants but that there were limited places in GTCs to cover the theory component. In response to a regular complaint from GTCs that the predicted MTTC, NCC numbers rarely materialised for classes, the MTTC said that they could not deny that this does happen, but that this was probably due to the fact that some student had taken time out. When MTTC were asked if I could have details of their statistics, I was advised that there are difficulties in getting these for the apprenticeship scheme, but they did think there was a rise in apprentices because of the backlog of applicants for the limited places available. Although MTTC were unable to provide me with statistical information another interviewee referred me the SADC UNESCO report (2010) which had stated that over the last ten years there are close to 50 to 60 thousand who have completed certificate 'B' and 'C' and NCC. I was told that this was over 200 thousand students who had achieved basic artisan skills. These figures appear contestable, which I suggest earlier in my critical review of this report and are probably the result of at least triple counting as apprentice's progress from levels B and C to the NCC level. The fact that MTTC were unable to produce their statistics raises my concerns of the data reliability.

The key problem with the NCC and artisan qualifications was suggested as the output quality as one interviewee stated;

'Bricklaying is an example; where those from Zimbabwe, Zambia and SA can all gain employment in Botswana, but local citizens cannot compete to the same standard' (Int8).

This same theme is taken up by another interviewee who suggested that, Botswana needs competent, semi-skilled and skilled artisans, and that this can only be achieved with greater emphasis on practice and achieving high standards of performance. There was also a view that Botswana should have developed a technician apprenticeship, rather than developing the BTEP. Technician training was originally delivered at Botswana Polytechnic following a City and Guilds of London syllabus. Students who successfully completed the NCC were then progressed to the Polytechnic to complete this technician qualification. Many of the successful students then ended up as lecturers teaching NCC in GTCs. The Polytechnic was eventually absorbed into Botswana University to create a faculty of engineering, but in 2008 a majority of the technician programmes, now University certificated, were returned to the MoESD through DTVET in a desire to become only a degree offering university. It is DTVET's intention to convert these transferred technician programmes to their BTEP qualification. In 2008 when the UB students were transferred to BCET they were already attracting support under the GLS, but BTEP students within the same institution did not achieve this until 2010, which understandably caused consternation and friction between students.

Reform of the Grant/Loan Scheme

Following the 2009 consultancy review of the GLS the department responsible has now been transformed into what is now called, 'Tertiary Education Financing' (TEF). The previous general funding categories have been reviewed and sent to the Permanent Secretary (PS) for consideration, but this still proposes using the points system for student selection (*36+ points required from BGCSE results or the equivalent*). The intention of the TEF now is to assess where Botswana needs support, compared to the previous system which supported everyone that met the criteria. Some other changes to the GLS have now been introduced namely:

- TEF no longer pays for student re-sits and retakes which the student now must pay themselves unless due to illness or other justifiable reasons,
- TEF no longer cover funding where parents have sent their child to another country, and then cannot pay the fees for the second and third years,
- If a student has benefitted before from the GLS then, the TEF is less likely to support again,

- All students should be under 30yrs of age at the time of entering the proposed qualification and have not benefited under the scheme previously.

With the expansion of tertiary private institutions within Botswana since 2007 it is helping to reduce the costs of sponsoring students in overseas countries. It was reported that the organisational structure of the TEF is still changing, and policies are being reviewed particularly with reference to vocational students.

In May 2010 as a special dispensation, the new Minister of MoESD approved all BTEP students from foundation level upwards to be considered under the GLS. This was in recognition of the importance of TVET and the development of technicians for the economy. The only requirement to access the GLS was for students to obtain a place at a GTC. One of the reasons given for this decision was that GTCs continued to lose students to the new private tertiary institutions who had been included in the grant/loan scheme since 2007.

Apprentice artisans under the MTTC are not currently sponsored, but rather surprisingly the TEF suggested that;

'If the GTCs give students a place, then they would consider sponsorship (Int4).

Here I am assuming that they have no employer, but if this is correct it could have substantial financial implications, particularly with the government takeover of the Brigades, where the majority of students are unemployed artisans. It was suggested that now GTC BTEP students could obtain sponsorship; this would raise the status of GTCs. GTC hostels must be filled up first before the additional off-campus allowance is awarded. The differential between 'on campus' and 'off-campus' student financial support has now been reduced, which should reduce pressure from students to be off campus (*P1200 on campus/1400 off campus*). The international economic downturn has impacted the TEF, such that they are now required to work within the budget and vary sponsorship according to the money available. For this reason, it is difficult to estimate how many future students they will support. This is causing some concern to the new private TET institutions as they see the possibility of lack of funding limiting their expansion.

Not all interviewees were aware that BTEP foundation level students could also be considered under the GLS (which is, in fact, below a tertiary level). The decision of open access and no points score requirement for entry to the GLS was considered

regrettable by some and could lead to corruption. Another view was that supporting the BTEP foundation level students on the grant/loan scheme was short term thinking, and that if students paid the fees themselves, they would have greater motivation to succeed in gaining access to the higher levels. There was clearly some confusion over how this policy decision is being implemented, as one interviewee thought that you could only be sponsored at one BTEP level, and therefore could not be sponsored again at the higher levels. If this was the case, it was suggested it might deter students from applying for the GLS at the lower levels. Under the existing requirements, all GTC students are liable to pay school fees of only P750 per year whether boarding or not. However, the TEF stated that every student who gains admission to any level of BTEP will be supported under the GLS. The TEF estimated that at the time of these interviews they had sponsored 500 students and that 2,700 were estimated to be sponsored during the financial year ending in March 2011. It was argued that the cost of including BTEP student under the grant/loan scheme would be marginal as the majority of the students were boarding on campus. It was suggested that it was the status of being on the GLS that was the attraction and also demonstrated equality of treatment for all post-secondary students.

Impact of BTEP now accessing the Grant/Loan Scheme

Competition with the private sector was reported as less evident now that BTEP students were covered under the GLS, although one interviewee suggested that student losses to the mushrooming private sector were still happening, but for different reasons, namely; private institutions could take students through to degree level. For that reason, it was believed it would be helpful if GTCs could provide a progression through to degree level. It was thought that if progression was clear from the beginning then GTCs could attract higher achieving students from the senior secondary BGCSE. Despite continuing losses, most GTCs considered that including BTEP within the GLS had been a positive step.

Reform of Government Technical Colleges

One change that is anticipated resulting from the new Tertiary Education Policy is that four BTEP Diploma offering GTCs will be falling under TEC and become autonomous (Parastatal) with their own financial management structures. This would leave four remaining GTCs without the parastatal status, but they are suggested to deliver BTEP foundation and certificate levels with all the students able to access the GLS. DTVET expressed concern at losing responsibility for half of

their institutions. For the GTCs predicted to become parastatals it was seen as very positive as two interviews show:

'Yes, we are planned to become a parastatal and that should make it better for us as we will not have to wait for someone to be appointed by the Ministry. We would also be able to manage our maintenance, which would be good or do it ourselves as part of our student training. We will also be able to appoint our own finance, supplies and library staff rather than have them allocated by the various ministries where they are seconded to us presently. Currently, you have no say over discipline; all you can do is to recommend, and the college suffers in the meantime. Even now we have problems with the Supplies Department, and those who have been transferred to us, and all we can do is to recommend, and that takes time. The 'Supplies' are killing us as the kitchen and catering company has not been paid for three months. They say we are waiting for the PS to authorise payment. Yes, we should be in a better position to compete with the private sector once we are a parastatal' (Int9).

'Once we become a parastatal we will then be equally competitive with learning institutions that are offering programmes at these levels. This will give a degree of autonomy to us in managing our programmes. Becoming a Parastatal has its challenges but we believe it will improve a lot of areas. Currently, the government has lots of controls, bureaucracy and procedures which delay progress. As a Parastatal, we will be able to recruit the calibre of people without having to look at other ministry procedures. Also purchasing and having the petty cash to buy small items. Presently we have to wait a week for funds and this reduces efficiency. We will be funded on the basis of students that we enrol and the courses that we are running. We need to be knowledgeable about costing and operating costs, unlike now where I do not know how much we have paid for electricity' (Int10).

There are task groups presently looking at the setting up of the new parastatal technical colleges (PTCs) and in particular the financial management necessary. It was reported that the PTCs will need additional training and that this has begun with TEC running, 'change management' courses. The requirements for the PTCs were reported as strict, and that many of the existing employees do not have the

appropriate skills and experience, and will need to be trained for their new roles and responsibilities.

DTVET is still anticipated to have a management role with these new PTCs although it has yet to be defined. PTCs will be paid depending on student recruitment, achievement and performance, but the details of this still have to be developed. DTVET currently provides funding to GTCs whether the students pass or not, but in the future this is likely to change and be controlled. PTCs will have responsibility for setting their employee salaries, but if they set these too high then, they will have to raise additional income by recruiting more students.

It was reported that at the time of this research the identified PTCs have only looked at various financial models in workshops, but no decision has been made as to which will be introduced. This suggests that PTCs may not follow the current common funding methodology applied to private and existing state parastatals, and questions if it produces a fair competitive market? DTVET have been informed that they will have a role in evaluating the new PTCs to ensure that they perform to the required standards. One interviewee thought that this proposed change of GTCs to PTCs might save the government money if they are encouraged to generate their own funds, although this is very much conjecture.

The Botswana Technical Education Programme Challenges

GTCs have since their inception been regarded as low-level institutions. This was because they were set up largely to provide the theoretical component of the artisan/craft apprenticeship programme. Vocational training was perceived as for those students who could not progress to BGCSE level in schools, and for this reason the GTCs were considered by many as at secondary or low level education and training and not TET. Reputations clearly take a long time to lose as the interviews begin to show indications of the academic/vocational divide. The opening up of a TET market brought the issue to the surface, as students started to leave GTCs in a desire to gain access to the GLS. The GLS until 2007 had been reserved solely for those students accessing the University of Botswana, parastatal colleges and overseas institutions. Some of the existing qualifications at the University were at certificate and diploma level, and these students had been supported through the GLS for some years. This clearly discriminated against the BTEP, which was also a certificate/diploma qualification, but this was probably due to the historical connotations of artisan/craft qualifications being considered as secondary level. The discrimination became even more apparent once the UB sub-degree students were transferred into BCET in 2008 who were also delivering BTEP.

Apprentices are normally considered to be employed, so understandably they would not be funded under the GLS. In reality, NCC was discounted considering it to be at the secondary level and therefore not part of TET. Entry at BTEP certificate level required students to have completed secondary level 5 (BGCSE level), whereas those with JC could join at the foundation level and then progress upwards.

BTEP as a Technician Qualification

Not everyone was happy with BTEP as one interviewee stated,

'When we developed BTEP, I admit I am partly to blame'. 'We made a mistake and established BTEP' (Int7).

The point was made that there were similarities with the NCC qualification but that NCC should be the highest artisan qualification. It was also stated that BTEP students are producing large quantities of paperwork, when they should be doing more practical and less academic work. The interviewee then stated,

'If I were Director of DTJET I would restructure BTEP to produce artisans because we are not producing artisans (Int7).

This is rather a surprising statement to make considering the alleged numbers of artisans trained currently. Another interviewee stated that the introduction of BTEP had proved unpopular as it was too theoretical, and there is insufficient practical. These are views which are checked out in the student interviews and which partly stem from the misunderstanding that BTEP was an artisan/craft programme rather than a technician qualification.

BTEP Progression

One of the main challenges with the BTEP has been the time it has taken to develop qualifications to the diploma level. However, in 2010 the number of BTEP advanced certificate programmes were running, and students should progress to diploma level in 2011. These are BTEP in hospitality, ICT, one in EME and another in business. The delays in launching the higher level BTEP have raised questions of confidence in the qualification. One interviewee stated that you can't go on waiting for the progression of one BTEP level to another, for a number of years, yet this has been the case for some programmes. Students have completed foundation or certificate but were then prevented from progressing, as the next qualification level had not been completed or validated.

It was suggested where employers had seen BTEP students on work experience they were very happy with the standard of achievement. There was a belief that finally people were starting to taste the results of the BTEP training and that this will

make a difference to its acceptability. Some interviewed said many BTEP criticisms were biased opinions and that insufficient marketing of BTEP had taken place.

The QAA reported that they run an annual BTEP conference for all GTCs, and those who help on the qualification validation and verification but that many from the University sector are unaware of the qualification. There was agreement that much needs to be done to promote BTEP and that this was the responsibility of the marketing officer at DTVET. The QAA stated that they were very willing to support BTEP promotion but that it was not within their mandate.

There was an indication that some students were struggling at the higher BTEP levels, but that also there were insufficient places available for progressing students. However, those that had been struggling were reported as gaining employment. Once students have completed the Diploma level then the whole BTEP can be evaluated appropriately.

Three GTCs are currently offering Advanced level programmes, and the Diploma final year should commence in April 2011. These three GTCs reported that they were now focusing on the higher level qualifications and recruit their students from other BTEP Certificate offering GTCs. It was also reported that some students cross from the University of Botswana (UB) programmes to BTEP and from BTEP to the UB, where students are testing the waters as to which was best. These are between the certificate and diploma level programmes.

Regarding the criticism that BTEP did not have sufficient practical content, one GTC manager stated that they were unaware of this. The main concern had been about the time available for some of the practical units; such that students have little time to complete the assessment. It was suggested that students would benefit from more practical work experience, to enable them to gain valuable industrial experience. GTCs could look at utilising the vacation periods to extend the work experience time. However, due to the limited industry and business base in Botswana, the qualification design brief for BTEP had considered it unrealistic to require extensive industry work experience, which would prevent students completing the qualification. The work experience component of the BTEP increases the higher a student progresses, such that at Diploma level six months industrial experience is required. Now that unemployed graduates were also taking up work experience it would make the industry opportunities even more limited.

Concerning access and progression for BTEP students to the university, it was reported that as yet no official meetings had taken place with the GTCs, although UB has been involved in the validation and verification of all the BTEP qualifications.

One GTC reported having met with the new Botswana University of Science and Technology (BUIST) who were very interested in BTEP, such that they may enter into a memorandum of understanding with them. This would only cover engineering, science and ICT students. It was anticipated that when students do join a degree programme from BTEP Diploma level they would expect them to be at 2nd or 3rd year level depending on the programme.

Reform of Brigades and the impact on DTVET and GTCs

In 2010, DTVET reported that they had taken over 21 Brigades out of the 42, but that limited staff vacancies were preventing them taking anymore at that time. It was also reported that Brigade staff had very low qualifications, such that some were being employed as workshop technicians rather than lecturers. The ability to upgrade these technician qualifications was hampered by a lack of funding presently. One interviewee hoped that Brigades would continue offering NCC level 'B' and 'C' certificate rather than moving to deliver BTEP. It was suggested that Brigades do practical training as well as teaching the theory component, so were more related to the apprenticeship training than GTCs. DTVET is only taking over the training aspect of the Brigades, and the production component remains with the Community, which could impact the practical training for the apprenticeship. DTVET was reported to be conducting a survey to rationalise the provision across GTCs and Brigades. DTVET were considering offering BTEP Foundation and Certificate in Brigades where they have the appropriate facilities.

DTVET Human Resource Issues

Recruitment of teaching staff remains the most difficult challenge. The lecturer vacancy rate in DTVET and the GTCs remains very high, despite regular requests through the department of Personnel, Recruitment and Retention for more staff. In DTVET, PDD, the delays in BTEP development and implementation have been due to inadequate DTVET HR, together with a lack of teaching staff in GTCs. Senior officers and lecturers are reported to be leaving for a variety of reasons, which is adding further strain to DTVET and the GTCs. Some have left to the private sector, to other ministries or have retired early; others have just resigned. Recruitment of lecturers to teach BTEP Advanced and Diploma level is also proving challenging as they need to be qualified degree holders according to the conditions of service, and these are rare to find in the vocational specialisms required.

It was pointed out that, Botswana doesn't have people qualified in Hairdressing and Beauty Therapy anywhere in the country and even if we recruit from other countries, they rarely are qualified at degree level within this vocational specialism.

An additional challenge to the lecturer recruitment was that BOTA now insist that any prospective lecturer applicant is registered with them, which is also impacting the recruitment process. It was stated that DTVET supported by corporate services have again embarked on a recruitment drive in Kenya, India and Germany to find lecturers to cover the BTEP teaching shortage areas. Unfortunately, the government procedures for recruiting outside the country take a long time to achieve a result. The DTVET salary scales and pension scheme are identified as uncompetitive, such that well trained lecturers are lost to industry or the private TET sector and parastatal organisations, as they all pay more than within the civil service grades.

Retirement

It was reported that some senior DTVET staff were taking early retirement. Retirement used to be 50, but more recently the consideration is given at 45. When the DTVET Director and Chief Education Officer together with the Head of Personnel and others leave at the end of December 2010, one interviewee felt that then there will be no one who understands the TVET system.

Temporary Full-Time Staff (TFTS)

At one point GTCs were able to recruit TFTS (Int9) where a person dies, is long term sick or leaves for another job, which has now added to the lecturer shortages. TFTS previously could be appointed on a termly or yearly contract for as many teaching hours as required. Now GTCs have to write to DTVET to request appointing a TFT, whilst in the meantime there are students without teachers. When BTEP commenced in 2000 there were many TFTs, which complemented the few citizen staff at the time. The recent reduction in TFTS has not matched the existing lecturer vacancies resulting in serious shortages in some vocational areas.

Expatriate Three-Year Contract Staff

When BTEP was first launched, the DVET Director, managed through the personnel process, to recruit a substantial number of experienced expatriate staff from Kenya. These were for the skill shortage area on three-year contracts. These were also supplemented by recruiting staff from Ghana, Zambia and Zimbabwe. Unfortunately, GTC principals were unable to renew these contracts because the government wanted to localise. It was the localisations policy which appears also to have created

staff shortages. Citizen lecturers are promoted, but then there is no one qualified and experienced to close the teaching gap. Detailed lists of all the staff shortages have been made and given to the office of the PS in the hope that they will recruit expatriates. Unfortunately, it was reported while I was interviewing that they had been unable to get any from India or Germany. QAA the BTEP Awarding Body said,

'If we could change one thing it would be for more staff to support our GTCs, but at the moment with two, three people running one process for seven GTCs it is impossible, quality is bound to be affected. The BTEP is spot on; it's probably the lack of support that is lacking. It is frustrating due to the lack of manpower. People do not see us as serious people (Int13).

Civil Service Scarce Skills Payments

There have been difficulties in recruiting suitably qualified staff in other areas of the civil service. As a result, in 2006/7 a scarce skills payment scheme was introduced to try to attract and retain staff in areas of shortage, and in particular in GTCs. Unfortunately as the scheme does not cover all areas it has led to disquiet, particularly with GTC Principals and Deputy Principals. The result is that they are supervising some heads of department that are earning more than they are. It was also pointed out that some heads of department now had no incentive to be promoted as they would then lose the scarce skills supplement.

Solutions Suggested

One key request by all GTCs was that they would like to appoint staff directly and in particular to appoint TFTS at any time needed to cover staff sickness and skill shortages. It was suggested that if GTCs were able to recruit the right calibre of people, with the relevant competences, it would be much better. It was also proposed that GTCs should be able to appoint expatriate lecturing staff, where no qualified and experienced local citizen can be found.

Senior College Managers also felt that they should be paid the skill shortage allowance to maintain pay differentials. It was considered that if GTCs become PTCs it would be much better as they will be able to recruit the necessary teaching staff and the resources to run the BTEP. I leave one interviewee to have the last say from DTVET:

'If we could change one thing it would be to motivate staff. We need to check what will revitalise the department. People are not aware that public administration has changed. We are now into management; we are

operating like a corporate business. The government is about processes, bureaucracy, and we have moved on from there, and people are not aware. This new thinking is about cost efficiency, and they don't know what we are talking about. When PBRS was introduced, we were just informed and not given the background. The global background has changed. They don't have the picture. They just see forms to fill in, and they don't know where it comes from and that they will be appraised. They cannot understand how it fits with management thinking. I think it is the guys at the top. I don't know whether it is the Minister or policy makers up there? New officers are arriving, and they have just been roped in. They come in and sit; they are probably demotivated and do nothing; there is no positive impact. I think the commitment of leadership is lacking. Take PBRS they say we are introducing a performance reward system. Then let people who have performed well be rewarded, but nothing ever has been done with the PBRS' (Int13).

The interview responses have raised a wide range of issues that are impacting both indirectly and directly on the BTEP qualification and GTCs. In many instances they support the findings from the statistical analysis with regards to lecturer recruitment and retention. GTC managers clearly feel unable to carry out their roles effectively as nearly all management functions have been centralised giving them no control of human resources and curriculum delivery.

The issues raised through the senior staff interviews will be considered further in the research discussion when the research strands are brought together.

Student Questionnaire Analysis

For each programme, the questionnaire raw data results can be found in Appendix 3. I present the findings below. I begin by considering the questionnaire sample and balance.

Male Female Percentages

Out of a total of 206 students surveyed, 54% were females. This is very close to the overall GTC total figures (53%) and has been achieved largely due to the BTEP admissions policy, which requires GTCs to recruit male/females according to the percentages applying. GTCs have no control of recruitment on NCC courses this being the responsibility of MTTC and employers. In Gaborone, BTEP females accounted for almost 59% and in Jwaneng almost the same at 57.5%. In contrast, Gaborone has two NCC qualifications and females were at 25% due to the engineering qualifications surveyed. At Jwaneng due to the broader number of courses, they fared much better at 52% due to high numbers of females on secretarial and accounting. The numbers of females are higher on programmes such as secretarial, accountancy, hairdressing and beauty therapy and hospitality and tourism and lower on engineering and construction.

Domicile (where students were born and educated)

Botswana is divided into nine districts and then a number of sub-districts where the main populations are concentrated. Here I use only the nine districts and the capital Gaborone. The districts are shown in Figure 6 together with the student numbers

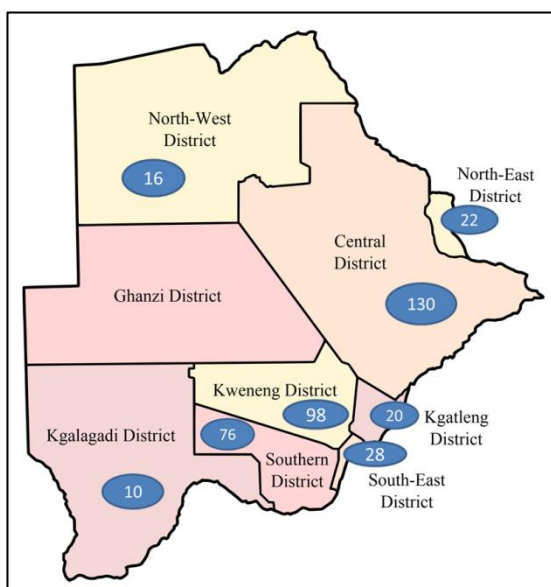


Figure 6: Botswana Districts (2010 student questionnaire data results)

completing the questionnaire. Not shown on the map are four students from Gaborone and attending the local GTC; a surprisingly small number, which I had expected to be higher. The only District to be unrepresented is Ghanzi, which includes most of the central Kalahari reserve. The map does show that GTCs enrol students from across the country from both urban and rural locations. When we look at the two GTCs separately we do see a slight variation as there are more students represented from around Kweneng District (29) where Jwaneng is situated, but they have no representation from Gaborone or North-West District. An additional factor at Jwaneng is that there is a limited boarding facility which mitigates to some extent, students coming from further afield, although students are often able to find accommodation with family friends or relatives. From this, we can suggest that students are prepared to travel from anywhere in the country to a GTC and that Gaborone and Jwaneng provide a fair representation from around the country. Villages and the districts were identified by the 2011 Botswana Census coding.

Students from rural villages

It was not possible to establish village sizes in 1990, but reviewing the 2011 village populations I selected a range (539 to 5545) as being relatively small villages. Within the range there are some villages close to urban centres, towards the higher end, but others that are remote. Within the village size range, we have approximately 21% of students. A closer analysis and a review of village sizes in 1990 would need to be studied to establish anything of significance here.

Student age profile

The ages of the students average from 21 – 29 years. Older students tend to be on the NCC programmes 2nd and 3rd-year students (29/28/25). On the BTEP Advanced level, the average age is 24 years, so slightly lower.

Students who have attended Senior Secondary School (SSS)

The number of students who indicated attending SSS was fairly evenly spread at around the 50% across all qualifications. Of BTEP students 44.4% indicated having attended SSS, whereas in the NCC and other qualifications a slightly higher percentage of 48.4% indicated this. A distortion of these figures was due to the rather higher percentage (80%) of an Accountancy and Business group at Jwaneng. Successful completion of this course, provides an opportunity to access to the Botswana Accountancy College, but would normally require 30+BGCSE points for entry thus requiring SSS completion. Two other courses that indicated high SSS attendance were in Gaborone on the BTEP Travel and Tourism (74%) and NCC

Electrical Installation at 80%. For the latter course, it would have been important to have established if the students were employed apprentices as this might be a reason for the very high SSS attendance as compared with other NCC courses.

From this, we can establish that GTCs have a mix of students from both SSS and JSS and are attending BTEP, NCC and other qualifications. It was always the intention for BTEP to enable access opportunities for JSS students, as when developed in 2000, there was little chance of obtaining any training other than the apprenticeship/NCC. JCC students will have accessed the BTEP qualification at foundation level.

BGCSE Student points score

One-third of students indicated attending SSS and submitted BGCSE results (69 students). In Gaborone, this was 42% of BTEP students but in Jwaneng only 10%. This reflects their programmes at foundation level. Jwaneng NCC and other courses fared better with 50% completing SSS higher level was shown earlier to be the result of the accountancy qualification.

Of those that indicated attending SSS and indicated BGCSE results, the majority (60) had achieved 30 + points. Of course, these are not verified, but do suggest the profile of students attending GTCs to be a wide mix of ability levels.

Why students applied to the College

No common reasons were given to this question. Some students selected because close to home and others because boarding facilities were available. Others suggested the GTCs reputation or because a particular qualification was on offer. NCC students said they had little choice and were sent presumably by MTTC or their employer.

Why students applied for a particular course?

Indications were that they were passionate about the subject being studied or recognised that this particular course would provide an entry requirement to another institution (*as with the accountancy certificate at Jwaneng*).

Qualification level that students wanted to achieve

50%+ BTEP students said they wanted to achieve a degree level, except BTEP Multimedia students who were more intent on completing their diploma programme. NCC students were less likely to have wanted to achieve a degree preferring to complete a certificate or diploma. One group, (60%) NCC painting and decorating

would have liked to achieve a degree although there is no graduate programme within this area.

Student preference to have gone straight to University

Students (50 %+) would have preferred a place at University except in one NCC group, which was poorly represented numerically against the actual student class numbers.

Student preference for current course to lead to a degree qualification

There was almost universal agreement among students wanting to progress ultimately to a degree level (NCC (97.57% and BTEP virtually 100%). It does suggest the value of ensuring all qualifications provide the opportunity of progression routes to higher qualifications where students are able.

Future career/job ambitions

A range of responses is given here. Many stated their dream was to start their own business or be a manager or professional in their chosen vocational field. NCC students tended to suggest an artisan fitter or plumber or a secretary/accountant. More unusual suggestions were the intention to run a mortuary and another to open up a cinema.

BTEP students suggested a surprising number of very specific, specialist jobs which probably have resulted from information gathered while studying for their qualifications of, interior designer, network technician, tour operator, somatology, cosmetologist, physiotherapist, web graphic designer or animation specialist. This appears encouraging as they have a specific career in mind.

Standard of Training being received

Significantly to the question, 'do you think that the training you are receiving now will give you a better chance of getting a job than going to University' almost three-quarters (72.33%) of students considered that they did. This view became stronger the higher level that the students were studying. At BTEP advanced level this was almost 100%. Perhaps more informative are the comments given by some of the students:

- (BTEP Adv.) *'Being a BTEP student, we are underestimated, and it is going to be hard if given some job with University students to prove we are much better than them'.*
- (BTEP Adv.) *'Yes because we do a lot of practical'.*
- (BTEP Cert) *'Yes because here we have more practical'.*

- (NCC) *'Yes because the industry wants people who are good at practical'.*
- (NCC) *'Yes because I am doing more practical than at the University'.*

From the small percentage of students saying no, they commented:

- (NCC) 'No all need to go to University'.
- (NCC) 'Maybe University has a better quality standard of education, but getting a job is an opportunity'.
- (BTEP) 'No because less chance of a job compared to the University students'.
- (BTEP foundation) 'I don't know, too early to say'.

The general view is that the amount of practical content within the qualifications put them at an advantage to the University students.

Student Questionnaire Conclusion

Students in the two GTCs sampled were nationally recruited, and nearly all districts are well represented. There is an encouraging balance of males/females probably resulting from the wide range of BTEP vocational courses now available and the GTC admission policies.

Some 50% of students have attended SSS and completed BGCSEs. Although unverified, a majority of these students have 30+ points suggesting that it was not surprising that some students had left to the private sector with the attraction of the GLS scheme prior to 2010.

Interestingly the majority of students considered that the training in GTCs would provide them with a better chance of getting a job than attending a University. Students became more positive about this advantage the higher level they achieved. Virtually all students would have liked the opportunity of progressing to a degree qualification level. Perhaps a key advantage of the BTEP qualification is the work experience which has to be gained throughout the qualifications leading to greater industrial experience and the possibility that employers will be keen to employ the students in completing their qualifications similar to apprentices where they are enrolled in a company.

The student questionnaire results will be considered in the next chapter when I discuss the three research strands findings.

Chapter Seven: Research Discussion

In this section, I address some of the issues resulting from this research.

We have seen that there are very few countries that are isolated from the globalisation effects of trade and business. Neither can a nation state develop individual policies that are completely independent of this global phenomenon. With the encouragement of the WB and IMF, many developing countries have been encouraged to establish neo-liberal policies as necessary requirement to compete globally. Botswana, however has never been subjected to WB structural adjustment programme and therefore has been able to independently establish its own brand of capitalism. I describe this as a leaning towards the developmental and market capitalist models as described by Ashton et al. (2000). This has resulted in substantial government investment in education and training. Even during the early years of independence tertiary defined education and training institutions had been established as parastatal organisation with the ability to manage their curriculum delivery, appoint their staff and manage their own resources. The government provided the funding in the form of a base budget which was then supplemented by student fees which were generally paid through the GLS. In 2007 private tertiary providers expanded with the incentive to access the GLS for their students. This new tertiary market was predicted to become increasingly competitive. When I questioned one of the senior manager driving the reforms, if Botswana's education system was following a neoliberal or social liberalism philosophy he responded:

'Yes money will follow students, and we will also intervene with financial funding tools. Look Institution 'A', (one of the first private Universities) whatever people may think about it, it did give them, (The government funded parastatal TET institutions) a run for their money. Yes, there will be competition; it is a reality now, yes we are adopting social liberalism, it is a good term... If we take it that and we decide if it is for the public good. But definitely we will not go in terms of who pays. We are in the middle and would like to protect significant areas. We do not want extremes; we will not pull out of certain areas if the private sector cannot deliver' (Int. 8).

Botswana has always been committed to privatisation, but with the need to build up a national infrastructure following independence, they followed the development capitalist model. With opening up TET to the private sector, this was designed to create competition and thus a movement towards the market capitalist model in the

belief that it will improve educational quality and result in cost efficiencies as funding follows students to the institution of their choice.

The image and level of BTEP qualifications

Perhaps a key factor in this research is that GTC's were initially only recognised as part of secondary education and training. This was probably not fully understood until 2007 when school fees were reintroduced at primary and secondary levels, and GTCs were included. With the launch of BTEP in 2000 and with the new buildings and excellent resources students were delighted at Gaborone Technical College and some students were heard calling themselves, 'Botswana's second university', showing how status can be improved through quality buildings, high technological equipment and a well-developed curriculum. The introduction of school fees started to change this perspective and was exacerbated by the newspaper articles that appeared at the time, exposing the fact that thousands of those who had completed their tertiary education had never repaid any of their government grant/loans (Sunday Standard Reporter, 2006). This did little to encourage parents of pupils including those students attending GTCs to pay school fees, despite the cost being very modest and with an exemption for those families and orphans deemed to be needy. To compound matters further, BOTA, who had been given responsibility for vocational education and training, also introduced registration fees for all GTC students and lecturing staff. The realisation that GTCs were at the secondary level caused great consternation and clearly impacted the image of TVET that had been cultivated since 2000. A further anomaly was the fact that the University of Botswana students on certificate and diploma engineering courses were transferred to GTCs in 2008, but continued to receive support under the GLS. This resulted in students on parallel certificate and diploma qualifications, classified in one case (UB transferred students) as tertiary accessing the GLS and BTEP students classified as secondary, paying school fees and also having to pay a registration fee with BOTA. Expatriate lecturers transferred to the GTC from the University with these technician courses also continued to be paid at levels above GTC managers and lecturers comparable with their previous University salary scales. It was not surprising that GTC senior managers were feeling demoralised and some taking early retirement.

Government Technical College Autonomy

Surprisingly GTCs since 2008 have seen a decrease in their autonomy, with an increased centralisation of their powers to the MoESD. The ability of GTCs to recruit short term contract lecturers (TFTS) was removed as was the ability to retain income from short course fees and college student services (i.e. car servicing,

hairdressing and beauty therapy and hospitality restaurants). This further compounded and demoralised GTC senior managers who are now impotent to respond to; lecturer sickness; the transfers of lecturers to other institutions, or appoint short term specialists for teaching key BTEP units. This has resulted in further reducing the numbers of courses that could be run, with insufficient lecturers to deliver some programmes and subsequently reduced student numbers. GTCs would like greater independence from government control, and this is clearly holding back this sector while they are managed through the overly bureaucratic civil service.

The recognition of BTEP under the GLS scheme and the tertiary level debate

To stop GTC student losses, the government possibly in a reactionary move, finally included BTEP under the GLS in 2010. This also included the BTEP foundation level that was below senior secondary level, a surprise to lecturers and managers who believed that it was the BTEP certificate to diploma level that was post-secondary. While GTCs are designated at the secondary level, there is likely to be little opportunity for change except the promise that four of them will be transformed into parastatal colleges in the future. In the earlier literature review, Obok-Opok, et al. (1997 p. 69) suggested that the poor image of VET was due to the tendency to admit failures into GTCs. These are the same sentiments stated by one of the senior managers interviewed in 2010. Obok-Opok, et al. suggests as a solution that the image and reputation and image of VET could be improved by recruiting students with good grades; by employing higher quality lecturers and to improve the resources and curriculum development. This is rather ironic considering that higher level secondary students are unlikely to want to apply for qualifications that were originally classified as secondary level. GTC facilities and resources have been improved to first world levels and the qualifications of many citizen lecturers have been raised, but without the recognition that GTCs are delivering tertiary education and training qualifications little was likely to change.

Clearly some believe that BTEP is the problem, and all would be resolved if it could be classified as a craft level qualification. The earlier literature reviews show that this is a view which is endemic in successive reports providing evidence of how entrenched the ideas are over the definition of BTEP (Siphambe, et al. 2009; Overeem, 2010). For this reason I have shown how BTEP was established, and developed from government policy and with a rigorous curriculum development model (Fig 3. P. 33). This involves close collaboration with industry, other stakeholders and international endorsement (SQA). For these reasons we can

justifiably say that BTEP appears fit for purpose, meets a Botswana industry context and is designed as a technician qualification.

Definition levels of BTEP and NCC qualifications

Botswana's own definition of tertiary education and training suggests that it is all education and training post-secondary education (Republic of Botswana, 2008). The International Standard Classification of Education (ISCED 2006) that provides educational definitions for comparison across countries is helpful here but has many complex subcategories. ISCED level 4 post-secondary non-tertiary education certainly applies to BTEP and is probably the reason that it was not included initially in Botswana TET. One of the problems for the BTEP qualification has been its flexibility providing certification and exit at each of the levels; foundation, certificate, advanced certificate and diploma. The whole programme which includes work experience is likely to take between 4 and five years full time to complete.

The NCC artisan apprenticeship scheme provides entrance at lower secondary level 3 category 24 but exit at a higher level at the end of four years (Figure 2 p. 30). In comparison to the BTEP it is understandably practically craft based and so ISCED level 4 would be an appropriate exit level.

BTEP foundation level clearly provides entry to students at lower secondary, but exits at upper secondary level 3 category 354 (Table 8 p. 42 ISCED). To access BTEP certificate level, requires school leavers to have achieved SSS, BGCSE level. To progress to BTEP advanced certificate and diploma requires much more, and as one interviewee suggested, should enable entry to at least second/third year of a degree in Botswana. With this in mind if we look at ISCED higher levels it states that:

Tertiary education builds on secondary education, providing activities in specialised fields of education. It aims at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It comprises ISCED levels 5, 6, 7 and 8 which are labelled as short- cycle tertiary education, Bachelors or equivalent, Masters or equivalent level, doctoral or equivalent level respectively. The content of programmes at tertiary level is more complex and advanced than in lower ISCED levels (United Nations Educational Scientific and Cultural Organisation, 2006, p. 46)

According to ISCED level 5 Short- Cycle Tertiary Education is defined to:

Provide participants with professional knowledge, skills and competences. Typically, they are practically based, occupationally specific and prepare students to enter the labour market. However, these programmes also provide a pathway to other tertiary education programmes (United Nations Educational Scientific and Cultural Organisation, 2006, p. 48)

For this reason, I suggest that BTEP advanced level and diploma level are certainly level 5 ISCED. Many diploma qualifications are a complete programme and only exit at the final year. BTEP, because of its design flexibility with exit at every level, should not be disadvantaged compared to a diploma that does not have exit levels at each year. For this reason, my opinion is that BTEP certificate to diploma level should be recognised as ISCED level 5. BTEP foundation is like a bridging course to bring JSS up to SSS at secondary level so should not be included under the GLS which appears a reactive move by the government to stop the loss of students to the private sector. This would provide students with an incentive to achieve and gain a place on the full BTEP diploma commencing at certificate entry or provide access to the apprenticeship scheme. This was also the opinion from some of the research interviews. Of course, apprentices employed would not need to access the GLS.

A point worth considering is that in Botswana students completing BGCSE; if successful commence a five-year degree programme. In the UK students completing GCEs would take another two years at an advanced level in secondary education before accessing a three-year university degree programme.

Botswana has been increasing the number of senior secondary places available, initially double shifting, but once the new buildings are completed most young people will progress to BGCSE level. This will very soon reduce the need for the BTEP foundation programme.

National Qualification Frameworks

Many countries are now looking to establish National Qualification Frameworks to help resolve qualification issues of the level and the quantity of learning achieved. Qualification titles are not always indicative of the level ascribed, such that an NQF may help resolve this. However it should be understood that foreign qualifications which are usually found within the private sector are only aligned to an NQF and should be levelled and quality assured from the country of origin, although it is necessary for the host country to carry out inspection to check fitness for purpose. Rigorous quality assurance systems are necessary to monitor educational markets to ensure that students are not provided with substandard education and training.

Education is not a product but a process and if not carefully monitored to maintain high standards it could impact students' lives detrimentally. BOTA was given the responsibility of establishing a Botswana National Vocational Qualification (BNVQ) framework which has been described earlier. A study for the establishment of an inclusive NQF in Botswana took place in 2006 (Cardno Agrisystems Ltd/Cardno ACIL, 2006). It suggests ten levels rising to Ph.D. doctoral degrees providing indicative level descriptors and comparative ISCED levels. The report shows the ten levels with suggested examples from within Botswana and the southern African region. I believe that there would be great value in establishing a single national qualification framework. Separate academic and vocational frameworks continue to reinforce the divide and reinforce the view that vocational qualifications are for those less able.

Need for both technician and craft/artisan qualifications

To take one of the interviewee suggestions to get rid of BTEP and turn it into an artisan qualification appears to be misguided and a complete misunderstanding. Botswana does need a quality artisan qualification, and there is the place for both artisan and technician qualifications. This research has shown justified criticism for the NCC, and its reform is long overdue. It has also suffered from staff shortages and urgently requires updating. It may be appropriate to consider limiting access to a revised NCC to only employed apprentices. In this way, the industry would be recruiting apprentices with the potential for high achievement. Industry, unions and educationalists should be closely involved in reforming and managing the scheme taking care to follow the German holistic training system which focuses on developing the individual for lifelong work, rather than focusing on industry short term needs. The current NCC has very low pass rates and is not appropriate for a high skills knowledge-based society, and efforts should be taken to raise the standards expected from students. In this way, they would be better able to compete with expatriate labour particularly in the construction sector. With focusing on employed apprentices, there will be a higher probability of achieving and maintaining high standards through the accountability to the employer. The problem with the current NCC is that it mixes employed and unemployed on the same courses and as shown earlier, 'is muddying the waters'. This is because those students without employment lack the opportunity for real industrial practical work which can never be replicated in an off the job situation.

One suggestion from the research interviews was that BOTA could consider using the industrial levy money to increase the number of industry based apprentices. If this was done it could greatly improve the value of the NCC qualification.

It may be appropriate for Botswana to explore the possibility of developing a new full time off the job artisan/craft qualification for students who do not have employment. This could, for example, be known as the Botswana Artisan Training Programme (BART). It could have similar outcomes to a reformed apprenticeship programme and prepare students at craft level for the industry. In this way when employers employ a 'BART' student they would recognise that they had achieved high level knowledge and understanding together with practical craft skills in processes and procedures, but that they have yet to gain the experience and speed which comes from working in industry. On obtaining employment, 'BART' qualified students could then after a period gainfully skilled status within a particular trade once they were assessed. The broader based education and training would also ensure that students were more easily able to progress to higher qualifications, something that all students have suggested is important.

Statistical Data

I have shown that educational and training statistics are a valuable tool for management planning and measurement providing they are valid and correct. However, statistics can also be misleading unless fully understood and calculated correctly which can easily lead to contestable outcomes and poor decision making. The GTC statistics show that numbers of NCC students have been declining (contrary to MTTC's claims) and that BTEP student numbers were increasing. NCC students only attend a GTC one term a year so are the equivalent of 1/3 of an FTE student whereas BTEP students attend full time. The critical factor obtained from the statistics was the shortages of lecturers. This has always been an issue, firstly due to the training of citizen lecturers to achieve higher qualifications. During this time, GTCs were able to appoint TFTS that generally were well qualified and had reasonable industrial experience. The problem was that some TFTS had been employed for up to seven years in some cases on yearly contracts. This according to Botswana law accorded them with full-time status and legitimately able to gain redundancy that GTCs had not accounted for. This resulted in a centralising of all lecturer appointments within the ministry HR division and the attempt to increase citizen appointments by replacing TFTS and expatriate lecturers. In itself, this appears a reasonable policy decision considering the high citizen unemployment in the country. However, it failed to recognise the acute shortages and the need to

expand the number of lecturers to meet the additional GTC facilities being constructed. The elimination of TFTS has compounded problems, resulting in no cover for lecturer sickness and training and the transfer and promotion of staff that is centrally controlled. Ministry HR is so remote from student delivery such that they have little understanding of GTC programme delivery needs. E.g. HR is unable to distinguish what subjects an engineering lecturer may need to teach and resort to appointing a graduate in engineering that often is unable to teach many of the subjects required. It is clear that DTVET and GTCs will never be able to manage effectively while controlled by the civil service. Even if they were only recognised as secondary, GTCs would never be able to become effective and efficient unless they can have increased management and control of their institutions.

The TEC have been concerned about the inefficiency of small institutions, and I would agree. There were however good reasons why originally institutions were established around the country to create inclusiveness and spread employment opportunities and student access. Unfortunately, each institution is required to have the same number of senior level managers and service staff. With small numbers of students, institutions are inefficient particularly as specialist lecturers would have insufficient classes to meet their contractual obligations. The solution might be to link institutions together in a franchising arrangement. This would enable lecturers to travel to take classes on a block release basis and management levels could be reduced according to the institution student population. TEC's idea of letting the money follow students in some ways may help solve this problem leaving managers to find solutions rather than making decisions remotely at the capital. The small GTCs would be better linked to one of the ones proposed to become a parastatal particularly as they all deliver BTEP. This would then ensure they were all recognised at post-secondary level.

Student Questionnaire Results

The student questionnaires indicated that 50% of students surveyed had attended SSS. Although I was unable to verify the BGCSE examination results the majority of these had achieved 30+ points suggesting the eligibility of these students to be considered under the GLS scheme if they had applied to a private TET institution. Some students had left GTCs in 2007, 2008, 2009 for the private sector as shown by DTVET statistics, but the 2010 survey shows that some have stayed, possibly because they were following a course which was not available elsewhere or they were now at BTEP advanced level. Interestingly some of the NCC students also indicated having 30+ points as well particularly on an accountancy programme

which gave access to the parastatal accountancy college. The survey shows that most students would like the opportunity of continuing their studies to a degree level if possible. This suggests the value of offering progression on all vocational qualifications. It would also have the benefit of attracting higher achieving BGCSE students in the recognition that if successful they can progress to a higher level in time. A majority of GTC students considered that the practical and work experience provided them with a better chance of employment than attending University. Students became more positive of this advantage the higher the level achieved particularly at BTEP advanced level.

Employment

The best test of validity of BTEP will be when students complete their diploma level and obtain employment. This will be the true test of their comparison to degree graduates. Only one tracer study has been conducted on BTEP back in 2007 and this was only able to look at students up to certificate level and consequently had mixed results. Senior staff interviews suggested that university graduates are increasingly finding it difficult to obtain employment as industry and business believe that fresh graduates do not have the appropriate skills and knowledge. Subsequently the MLHA has set up the graduate internship to place students in business to gain the necessary skills and improve their work ethic. Graduate unemployment is likely to increase as the students from the new private sector begin to exit from their studies in the future. BTEP students have gained their practical and work experience while studying so should be well placed to find employment compared with graduates and should be a valuable area for research in the future. Labour market information is vital for developing and updating education and training courses. I have shown that when developing BTEP what information was available on jobs and employment is used in constructing qualifications and industry and business are also closely involved in the validation and quality assurance processes in BTEP. Unfortunately labour market information does appear to be sketchy and often DT/VET were reduced to scanning newspapers to identify skill shortage areas. I am sure that Botswana is committed to improving labour market information as are most other developing nations. Not only is accurate statistical data necessary but it also needs to be presented into the public domain promptly so that appropriate action can be taken.

Chapter Eight: Conclusion

Developing countries such as Botswana are often influenced by their previous colonial countries, although the UK did little to develop or invest in the country prior to their independence in 1966. There are indications of some borrowing influences as Botswana has developed politically and in its TVET education system mostly from the UK but also from Germany. Countries need to be careful on which policies and systems they pursue as they could lead to unwanted consequences. I have shown that there are many varieties of capitalism and Botswana tends to be following a combination of the developmental and market models as described by (Ashton, et al., 2000). The developmental model tends to be favoured by the South East Asian countries and is suggested to lead to high skills economies where as the market model of Anglo Saxon countries is suggested to result in low skill economies. Care will need to be taken as to which model is given greater emphasis as Botswana have stated their commitment to creating an economy of employment in high value jobs. The University sector will clearly play an important part in realising the countries vision but to enable every citizen to achieve their full potential then TVET and the countries technical college also have a significant role to play in providing opportunities for all throughout life to raise skills and increase knowledge and understanding.

Botswana's investment in education is truly remarkable and not surprisingly they admit unsustainable in the longer term. The government technical colleges the 'Cinderella service' of many countries (Randle & Brady, 1997) have physical facilities and equipment (*Cinderella's clothes*) the envy of many visitors from first world countries. The fact that GTCs were initially regarded as secondary education and training is probably due to their historical establishment to provide the theory component (NCC) of the craft apprenticeship programme where many students entered at junior secondary level. The NCC is a artisan/craft level course and to complement it, the BTEP was developed and launched in 2000 as a technician diploma programme.

Interestingly there were a number of examples of certificate and diploma qualifications being offered at Botswana University and in the other parastatal institutions which were particularly comparable with the BTEP qualification, but it appears that GTCs had never been considered to become parastatal institutes until the student losses that occurred with the commencement of a tertiary education and training market in 2007. Numbers of students in TET expanded rapidly as private

education institutions were given access for their students to the government grant loan scheme (GLS) for the first time. The GLS is generous compared with many other countries and demonstrates the government's substantial commitment to encouraging students progression into tertiary education and training. Comparatively, GTC students were required to pay school fees reintroduced in 2006 along with primary and secondary school pupils. Additionally the Botswana Training Authority (BOTA), now a parastatal organisation responsible for work based training, required all GTC lecturers and students to pay registration fees. GTCs recognised that the apprenticeship programme was intended as a work based training qualification but considered that BTEP was an off the job technician qualification, which should have been considered as tertiary education and training. From 2007 GTC students who had completed national BGCSE qualifications with sufficient grade levels, began to leave the BTEP qualification by gaining admittance to private tertiary educational institutions, which were now able to offer access to the GLS. Although the GLS often required students to pay back a proportion of the loan; historically this had rarely occurred, resulting in a public outcry as the school fees were reintroduced in 2006. The GLS was subsequently reviewed, the management organisation given parastatal status (Now called Tertiary Finance) and changes proposed to improve repayment of student loans as well as tightening up systems and procedures.

It was not until May 2010 that the Minister of Education took the logical step to include BTEP students in GTCs under the GLS in an attempt to stem student losses to the private sector. Although this did reduce student losses, GTCs were still highly underutilised, due to acute lecturer shortages, compounded by an increasingly bureaucratic centralised civil service human resource division.

In recognition that the BTEP qualifications should have been recognised as part of the TET market, it was proposed that the four largest GTCs would in the future be converted into parastatal institutions. This would then enable them to compete more favourably with the other tertiary registered institutions. This decision is predicted eventually to improve matters regarding the lecturer recruitment, promotion and retention and the management of resources. Regrettably this will leave the remaining GTCs together with the newly formed community colleges (*as a result of the take-over of Brigades*), to grapple with continued staff shortages and lecturers with inadequate industrial experience still delivering some lower BTEP levels. Steps have been taken to recruit experienced and qualified expatriate TVET lecturers to train citizens to meet the critical lecturer shortages in GTCs, but this may not prove

successful as shown in the past. The challenge for TVET is that lecturers need to be professionally technically qualified, but also require industrial experience to teach vocational practical skills competently. With no incentives or recognition of industrial experience in the current civil service conditions of service, existing lecturers prefer to take academic qualifications, which give access to improved salaries and increased promotion prospects. Some well-qualified lecturers have now moved to the private sector and to parastatals with the attraction of a higher status and salary structures compared to civil service grades.

In a positive attempt to increase the number of citizens employed in GTCs, the ministry HRD successfully reduced the number of expatriate lecturers and replaced them from 2005 to 2010. Understandable for any country when unemployment is high, it is important to make every effort to employ its citizens rather than expatriates. Regrettably many of the expatriate lecturers replaced were highly qualified and experienced and had proved a valuable asset to GTCs when they launched the BTEP qualification in 2000. The overall number of lecturers in GTCs has remained virtually unchanged over this ten-year period. This would have been appropriate if Botswana assisted by the EU, had not invested in the construction of three new colleges, each having a capacity of over 1000 FTE students which effectively doubled the overall GTC capacity available. The situation has been exacerbated by the government HR division centralising control of appointing part time full time lecturers (TFTS), such that when lecturers are sick, promoted or transferred, GTC managers are unable to provide adequate teaching cover for classes. The inordinate delays in appointing any new lecturers, has also contributed to a desperate lecturer shortage within GTCs. It has been clear for the last ten years that it was difficult to recruit qualified and industry experienced lecturers on the government civil service pay scales, and various schemes have been tried to improve matters; scarce skills allowances, increasing the number of senior lecturers and proposals to improve overall salary scales. Within the civil service schemes, all have resulted in little increased recruitment and in some cases has reduced the lecturer-student contact hours where lecturers were promoted on the existing conditions of service criteria.

Botswana has in the past been congratulated for its education and training policy making, demonstrating their commitment to achieving an educated nation. However now that Botswana is at the implementation phase, they are finding that policies and strategies are much easier to make than to deliver. One interviewee said,

'That is the problem, we are good at developing policies but we are very poor at implementing' (Int7).

This is not unique to Botswana according to a World Bank report, (2007, p. 41),

'In Africa we are good at drawing up strategies and plans but when it comes to implementation there is always a difficulty'.

Perhaps Botswana should be encouraged as this challenge is not just confined to Africa. Wallace, Fertig, and Schneller, (2007) state actually managing change within the public service is relatively unmanageable. The research interviews suggest that very few senior managers fully understand all the changes taking place, their purpose and what the system will eventually look like. Many also appear to have a limited and at times confused conception of the TVET sector and its qualifications.

Clearly there is still much to play for, as government departments take positions and demonstrate a reluctance to implement some of the proposed logical organisational changes, to bring together education and training under one ministry to prevent duplication. Past Botswana President Masire, (2006) recognised that sometimes the civil service can thwart cabinet decisions and this could still be the case as I suspect that not everyone likes change.

I will now summarise the response to the research questions set out at the commencement.

The first question asked, what impact has the tertiary education and training market, and its related organisational change had on Botswana government technical colleges and in particular on the Botswana Technical Education Programme qualification?

I have shown that initially both BTEP and NCC qualifications were only recognised as secondary education, suggesting that government TVET was marginalised in favour of more academic qualifications. The research highlights confusion over TVET qualification in a belief by some, that BTEP was a replacement for the NCC artisan qualification (Siphambe, et al., 2009; Overeem, 2010) which I have shown was never the case. The TET market which began in 2007, and now included private institutions for the first time had an immediate effect. It provided a wider access for students to enter tertiary defined institutions with the attraction of accessing the government GLS providing institutional fees and student subsistence allowances. The private sector institutions began particularly effective marketing campaigns to attract students to their new institutions and the courses they offered at certificate, diploma and degree levels. These new private institutions together with existing parastatal institutions were required to register with the TEC who are the regulatory body responsible for ensuring quality and standards. The Mmegi

newspaper in April 2007 asked why the TEC had registered substandard private colleges that had poor resources and no libraries. The Director of the TEC responded that they had been registered on a developmental basis and would continue to be monitored to see that improvement were made (Baputaki, 2007) perhaps always likely to be an issue when starting up an education market. Other issues arose around the GLS. Private institutes had little in the way of student accommodation and this resulted in students being given a higher allowance than those in parastatal institute hostels. Students clearly preferred the larger allowance and began opting for the private sector being able to find their own accommodation with family, relatives or friends or complaining about the quality of hostels and food provided at parastatal institutes. The government GLS had for some time needed a serious review and restructuring as few previous TET students had repaid their loans, making this particularly annoying for primary and secondary students and parents when school fees were reintroduced in 2006 as part of the government cost sharing initiative. The GLS was transferred into a new parastatal organisation and steps were being taken to try and achieve a fairer system and to try and reduce waste and recover more of the loans from students following graduation. Only time will tell if this proves more successful than in the past. In March 2007 the Sunday Standard newspaper announced that Government Technical Colleges are not tertiary institutions, but this was explained by the Head of the TEC because they had not yet registered. All the Technical Colleges then completed the TEC application forms, but it was much later before only four institutes were approved to become eventually parastatal. During this time quite a number of students enrolled on the BTEP qualification in GTCs had begun to leave their existing courses to gain access to the new private TET institutes with the attraction of gaining the government GLS. These students were the better qualified ones who had achieved sufficient points under the BGCSE examinations. Generally the private TET institutes were concentrating on business type qualifications as these programmes require fewer resources. To prevent students haemorrhaging from the GTC, BTEP qualifications the government, in May 2010 finally took action to include the BTEP qualification (and thus students enrolled) under the GLS. This research interviews suggest that this has helped stem GTC student losses. TET Finance suggested that now BTEP is included under the GLS; that it will also improve the status of GTCs. It is difficult to disentangle the effects of the TET market on GTCs as other major changes and reforms have been taking place at the same time. These are the government take-over of community Brigades; the transfer of certificate and diploma engineering and construction courses from the University of Botswana to GTCs and the management

of large construction projects to complete the expansion of the government TVET system. There was also confusion over the roles of BOTA and TEC and the duplication of training provision under the MLHA and MoESD which appeared to have created further challenges and at times confusion within DTVET and its GTCs. An issue shown in this research of insufficient lecturers to support the expanded government TVET provision has been a challenge to the system for many years and the increasingly centralised government HR control has limited the flexibility of GTCs, to appoint part-time staff to cover sickness and teaching skill shortages. Any lecturer recruitment achieved, has reduced the reliance on expatriate labour, but the HR resource remains inadequate for the excellent physical facilities now available, leaving some buildings underutilised. Lecturer salary levels are unable to compete with the TET private sector and parastatal institutions and the steps to improve this under the government scheme of service such as skill shortage payments, increasing the lecturer grades have led to reduced teaching contact available and the demoralisation of GTC managers (Principals and Deputies Principals) who are in some cases paid less than their senior lecturers.

The second research question asked; how can the Botswana government technical colleges compete on equal terms within this new tertiary educational market? To some extent the Botswana new tertiary education market has exacerbated the divide between the so called academic and vocation qualifications. The new BTEP qualification and upgrading of GTC facilities had done much to raise the status of what had been previously called vocational colleges. However the reintroduction of school fees for primary and secondary schools together with student registration fees being required from BOTA began to expose more significantly that GTCs were classified as secondary education vocational institutions. It unfortunately made no difference that GTCs were offering qualifications at the same level as a number of parastatal institutions whose students had been under the GLS but in some ways it did expose these disparities and bring the issues into the open. It was not until students began to leave the BTEP qualification for the new private tertiary institutions to access the GLS over a protracted period such that it became politically sensitive and in 2010 the Minister for education announced that students on the BTEP qualification in GTCs would all be considered under the GLS. This was a constructive step which brings recognition and status to BTEP and the GTCs and it was unfortunate that it had not been considered earlier. Interestingly Obok-Opok, et al. (1997) as a result of carrying out a community and employer survey on vocational education and training recommended that there was a need to raise the

standard of lecturers and students in GTCs. DTVET have improved the qualifications of lecturers since 2000 and the BTEP qualification was improving the level of student attainment. Unfortunately the fact that GTCs were not originally classified as tertiary resulted in the higher qualified students leaving to access private TET institutions to obtain access the GLS. Fortunately this matter has now been addressed and as shown the four GTCs with the largest student FTEs will now become parastatal organisations, and this will be essential for them to be able to compete eventually on equal terms within the sector. This regrettably takes no account of the other GTCs and the community colleges being formed from the takeover of the Brigades. These institutions will be blighted by the continuing 'secondary' lower status label, with continuing lecturer shortage and an inadequate centralised government HR system. One solution would be to link or franchise these smaller GTCs with those planned to become parastatal. This would raise status, assist in autonomy of resources and also enable continuity within the BTEP qualification. All the evidence suggests that while GTCs are managed through the civil service personnel system that they will continue to be inadequately staffed and therefore underutilised. Ideally all GTCs need to have greater autonomy similar to all the TET institutions. This is encouraged in the WB, Skills Development in Sub-Saharan Africa report (2004) which suggests that where centralised public training systems have become more responsive, is where more powers are delegated to institutions (Johanson & Adams, 2004).

The student questionnaire indicated that they overwhelmingly (NCC 97.57% - BTEP 100%) would like all qualifications to provide the opportunity for progression to higher qualifications and degree where they have the capability. This would not be an automatic process but should be based on achievement on their existing qualifications. Some discussions have already been taking place with BUIST, but discussions with all Universities need to be formalised and then promoted through marketing BTEP more effectively. This would also give greater incentive for students to apply to GTC vocational qualifications on a more equal basis with the other TET institutions.

The student questionnaire also indicated the strong perception (72.33%) that the practical content of BTEP would give them a greater chance of employment than if they had attended a university. This view became stronger the higher the level being studied (BTEP Advanced level 100%). Of course if this is just a perception, but can be confirmed by conducting student tracer studies on completion of the diploma level. BTEP students do have industrial work experience at every level such that

employers are able to judge the work ethic and ability of students which could place them in a better position for finding full time employment, but again this needs further research to confirm this. If this proves to be the case then it will provide an excellent marketing advantage for recruiting students to the BTEP qualifications. GTCs need to review their BTEP admission and selection process and consider raising standards of entry particularly where progress to the advanced and diploma level as statistics show a fall in numbers of students achieving presently. It may be that some of the more practically based students would have benefited from completing a craft/artisan level programme in the first instance and then if they are successful provide a bridging course to the BTEP advanced level for the most able students..

Interviews indicated the need to reform and update the NCC apprenticeship programme, and it may help to give the NCC and BTEP qualification organisations greater autonomy to improve staff recruitment and the management of qualification delivery quality.

Challenges of developing BTEP

There is no doubt that the BTEP qualification development has been far too slow, delaying student progress and needs to be rectified if it is to be valued and taken up by the private sector in the tertiary market. Interviewees suggested that BTEP was shortly to be reviewed, and this is a positive development, provided the evaluators understand TVET and technician qualifications. In many ways, it would have been more helpful to wait until students exit at the diploma level to really evaluate the outcomes, as by then employers would be better placed to validate the results and recommend improvements. A tracer study in 2007 indicated that there was confusion over the purpose of the BTEP qualification and its multiple exit levels and had encouraged DTVET to market these factors more vigorously (IBF International Consulting, 2007). DTVET have failed to do this, probably because they have been so absorbed with taking over the community Brigades, the transfer of courses from the University of Botswana and the management of two large GTC building projects together with expansion of the Gaborone GTC facilities.

The quantity of BTEP paperwork has also been criticised, as well as the amount of the assessment that covers every learning outcome. The problem with outcome and competence modular/unitised qualifications is that often the same things are assessed in every module/unit. This places an undue amount of time on assessment.

Concluding comments

Governments are encouraged to get the policies right for establishing training markets to provide a level playing field for all parties (Johanson & Adams, 2004). Botswana is recognised as a country which established excellent policies. Unlike many other countries Botswana has invested heavily in TVET, through their technical colleges by constructing excellent facilities and with first world equipment and resources. A huge investment has also been made in developing the national BTEP qualification and establishing the necessary standards in quality assurance standards in GTCs. Substantial investment has also be made in upgrading lecture qualifications and the development of curriculum development and the necessary quality assurance skills. Regrettably, perhaps due to misunderstanding the tertiary reform excluded GTCs and their vocational qualifications. Even if the GTCs are now given parastatal status, it is likely to take a number of years for them to compete effectively within the tertiary market. The GTCs do provide significant areas of training covering technician and artisan levels which are vital for any growing economy. They also provide education and training across key areas of the country and cover vocational areas that are costly in terms of resources such that they are rarely taken up by the private sector (E.g. Engineering and Construction). Leadership will be a critical factor for GTC if they are given more autonomy and unfortunately a number of the key leaders have retired early or left the sector as indicated in the senior staff interviews. Government technical colleges have a significant contribution to play in achieving Botswana's vision of an educated and knowledge-based society, as both artisans and technicians qualified to international standards have a key part to play in any first world economy.

Perhaps the greatest strength of TVET is also its greatest weakness, in that it attempts to do everything and satisfy and meet the needs of all. It is focused on providing the knowledge skills and competences that are required by business and industry and does this through a variety of learning modes and methods. It provides opportunities for access to all sectors of society and also enables lifelong learning. Botswana has clearly valued and invested heavily in its government technical colleges and it would be disappointing to see them become marginalised within the new tertiary education and training market. The technical colleges will need support if they are given the autonomy and independence that they require to operate within this new competitive situation, but with strong leadership they have the potential to provide high quality, highly trained employees to the growing economy of Botswana and become an exemplar of TVET around the world.

This thesis has been a personal journey and I recognise that due to my time spent in Botswana I have taken a broad and in depth research which has been time consuming. The multiple organisational changes in the Botswana education system have made this research challenging to follow, a fact which was demonstrated in the confusion among many of the senior staff interviewed. At the time of the research changes were still being adjusted due to unintended consequences and pressures from civil service participants. This has made it challenging to establish and present the research key issues in a coherent manner.

The case study may prove helpful to other countries considering such similar radical change and may recognise that Germany's incremental style of change might prove a preferred option to the Anglo Saxon radical change methodology. Botswana shows that the effects of government change are rarely predictable and there is always the possibility that the change could damage or destroy some of the really positive attributes of existing systems. TVET is not an area well represented in research terms. This should encourage TVET lecturers and managers to become more involved in research to ensure that vocational education and training is fairly represented and valued in the future.

Further research is needed on the marketization of TET education and the quality and cost benefit of privatised/parastatal organisations. It is certainly apparent that markets cannot be relied on without regulation and rigorous independent quality assurance systems as shown by the world financial banking crisis in 2008. Perhaps it would be in the public's interest to establish, controls, checks and balances before markets are launched rather than waiting till problems emerge before corrections are made as student lives could be adversely impacted by educational market failures.

Bibliography

- Alexander, R., 2000. *Culture and Pedagogy*. Oxford: Blackwells.
- Allais, M. S., 2007. Education service delivery: The disastrous case of outcomes-based qualifications frameworks. *Progress in Development Studies* 7, No 1, pp. 65-78.
- Anon, 2006. MoE owed enough to defer school fees by 10 years. *Sunday Standard*, 3-9 September, pp. 1-3.
- Anon, 2013. *Botswana turns to Zimbabwe for vocational education*. s.l.:<http://www.globalpost.com/dispatch/news>.
- Ashton, D., Sung, J. & Turbin, J., 2000. Towards a framework for the comparative analysis of national systems of skill formation. *International Journal of Training and Development*. 4:1, pp. 8-26.
- Atchoarena, D. & Delluc, A., 2002. *Revisiting technical and vocational education in sub-Saharan Africa: an update on trends, innovations and challenges*. Paris: International Insititute for Educational Planning/UNESCO.
- Ball, S. J., 2007. *Education plc*. Abingdon, Oxon: Routledge.
- Baputaki, C., 2007. Why TEC registered sub-standard colleges. *Mmegi News Paper*, 4 April, p. 7.
- BERA, 2004. *Revised Ethical Guidelines for Educational Research*, Nottingham: British Educational Research Association.
- Bhaskar, R., 1989. *Scientific Realism and Human Emancipation*. London: Verso.
- Bonal, X., 2002. The World Bank Global Education Policy and the Post-Washington Consensus. *International Studies in Sociology of Education Vol 12 No1*, pp. 3-22.
- Botsang, k., 2009. 106000 defaulting students still own govt. *Daily News*, 20 July, p. 15.
- Botshelo, I. S., 2007. *Botswana Country Report, Audit of the SADAC Protocol on Education and Training*, Gaborone: University of Botswana, Centre for Continuing Education.
- Botswana Central Statistics Office, 2009. *Demographic Survey 2006*, Gaborone: Republic of Botswana.
- Botswana Evaluation Services Team, 2009. *Consultancy Services for the Review of the Grant/Loan Sponership Scheme of the Department of Student Placemenet and welfare Ministry of Education, Republic of Botswana*, Gaborone: Republic of Botswana.
- Botswana Training Authority, 2009 . *Botswana Training Authority Annual Report (2008-2009)*, Gaborone: Botswana Training Authority.
- Botswana Training Authority, 2009 July. *Botswana Training Authority 2008-2009 Annual Report*, Gaborone: Botswana Training Authority.

- Bottery, M., 2005. The individualization of Consumption: A trojan Horse in the Destruction of the Public sector?. *Educational Mangament Administration & Leadership*. Vol 33 (3), pp. 267-288.
- Bray, M., 1996. *Counting the Full Cost*, Washington: World Bank.
- Bresser-Pereira, L. C., 2012. Five Models of Capitalisim. *Barzilian Journal of Political Economy*, Vol. 32, No.1 (126), pp. 21-32.
- Brockmann, M., Clarke, L. & Winch, C., 2008. Knowledge skills, competence: European divergences in vocational education and training (VET)-the English, German and Dutch cases. *Oxford Review of Education*, Vol. 34, No. 5, pp. 547-567.
- Brown, P., Green, A. & Lauder, H., 2001. *High Skills*. Oxford: Oxford University Press.
- Brown, P. & Lauder, H., 1997. Education, Globalization, and Economic Development. In: *Education Culture Economy Society*. Oxford: Oxford University Press, pp. 172 - 192.
- Brown, P. & Lauder, H., 2001. *Capitalisim and Social Progress*. Basingstoke: Palgrave Macmillan.
- Brown, P., Lauder, H. & Ashton, D., 2011. *The Global Auction*. Oxford: Oxford University Press.
- Burgess, R. G., 1984. *In The Field, An introduction to Field research*. London: Unwin Hyman.
- Cardno Agrisystems Limited ACIL Pty, 2007. *Education Public Expenditure Review*, Gaborone: European Community.
- Cardno Agrisystems Ltd/Cardno ACIL, 2006. *A Study for the establishment of a National Qualifications framework in Botswana*, Gaborone: s.n.
- Chomsky, N., 1999. *Profit over People: Neo Liberalisim and Global Order*. New York: Seven Stories Press.
- Colclough, C., 1991. Who Should Learn to Pay? An Assessment of Neo-liberal Approaches to Education Policy. In: *States or Markets?*. Oxford: Oxford University Press, pp. 197-213.
- Cook, A., 2006. *Botswana: Education Public Expenditure Review- Enhancing Education Delivery*, Gaborone: Botswana Department of Technical & Vocational Education & Training.
- Crouch, C., 2005. Models of Capitalisim. *New Political Economy*, Vol.10, No. 4., pp. 439-456.
- Dale, R., 1999. Specifying Globalisation Effects on National Policy: A focus on the Mechanisims. *Journal of Educational Policy* Vol 14, No 1, pp. 1-17.
- Deloitte, 2006. *Realising Our Potentials: A National Human Resource Development Strategy for Botswana*, Gaborone: Ministry of Finance and Development Planning.

- Department of Vocational & Education and & Training, 2007. *Manpower Requirements 2008/2009*, Gaborone: s.n.
- Department of Technical & Vocational Education & Training, 2010. *DTVET Annual Statistics 2010*, Gaborone: Department of Technical & Vocational Education & Training.
- Department of Vocational Education & Training, 2000. *Annual Report*, Gaborone: Republic of Botswana, Ministry of Education.
- Department of Vocational Education & Training, 2004. *Technical College Statistics* , Gaborone: Department of Vocational Education & Training.
- Department of Vocational Education & Training, 2006. *Technical College Statistical Report 2006*, Gaborone: Department of Vocational Education & Training.
- Department of Vocational Education & Training, 2007. *Technical College Statistics Report*, Gaborone: Department of Vocational Education & Training.
- Department of Vocational Education and Training, 2007. *2008/2009 Manpower Submissions*, Gaborone: s.n.
- Edited by Wallace, M. & Poulson, L., 2003. *Educational Leadership & Management*. London: Sage Publications.
- Elteren, M. v., 2003. U.S. Cultural Imperialism Today: Only a Chimera?. *SAIS Review of International Affairs*, pp. 169-188.
- Estevez-Abe, M., Iversen, T. & Soskice, D., 2001. Social Protection and the Formation of Skills: A reinterpretation of the Welfare State. In: *Varieties of Capitalism*. Oxford: Oxford University Press, pp. 145-183.
- Etienne, J. & Schnyder, G., 2014. Logics of Action and Models of Capitalism: Explaining Bottom-Up Non-Liberal Change. *Swiss Political Science Review*. Vol.20(3), pp. 365-387.
- European Centre for the Development of Vocational Training (Cedefop) , 2011. *Vocational Education and Training at Higher Qualification Levels, Research Paper No 15*, Luxembourg: Publications Office of the European Union .
- European Ministers for VET, the Social Partners and the European Commission, 2010. *The Bruges communique on enhanced European cooperation in Vocational Education and Training*, Bruxelles: European Commission.
- Eynon, R. & Wall, W. D., 2002. Competence-based Approaches: a discussion of issues for professional groups. *Journal of Further and Higher Education*, Vol 26, No, 4, pp. 317-325.
- Fairclough, N., 2000. *New Labour New Language?*. London: Routledge.
- FAS International Consulting Ltd, 2001. *A Comprehensive Evaluation of the Brigades in Botswana*, Gaborone: Commissioned by the Department of Vocational Education & Training (DVET), Ministry of Education.

- Gabaratane, P., Mmopi, T., Morris, B. & Morris, I. D., 2004. *Confidential Report on Working Conditions of temporary Full Time Staff in the VET Sector*, Gaborone: Botswana Department of Vocational Education & Training.
- Gerring, J., 2007. *Case Study Research*, Cambridge: Cambridge University Press.
- Gewirtz, S., 2002. 'Can managerial means be harnessed to social democratic ends? critical reflections on new labour's 'third way' policies for schooling in England'. *A Journal for New Thinking in Philosophy for Education*, pp. 36-47.
- Gleeson, D. & Shain, F., 2003. Managing Ambiguity in Further Education. In: *Effective Educational Leadership*. London: Paul Chapman Publishing, pp. 229-246.
- Gray, J., 1998. *False Dawn: The Delusions of Global Capitalism*. London: Granta Books.
- Grethen, D., 2010. America's misplaced disdain for vocational education. *Tribune Media Services/The Economist*, 20 June.
- Hall, P. A. & Soskice, D., 2001. An Introduction to Varieties of Capitalism. In: *Varieties of Capitalism*. Oxford: Oxford University Press, pp. 1-67.
- Heyneman, S. P., 2003. The history and problems in the making of education policy at the World Bank 1960 - 2000. *International Journal of Educational Development* 23, pp. 315-337.
- Hofstede, G., 2003. *Cultures and Organizations*. London: Profiles Books Ltd.
- Hughes, P., 2005. Why access to TVET for all is essential if education for all is to be achieved. *Prospects*, Vol. XXXV, no. 3, September, pp. 253-267.
- Hyland, T., 1997. Reconsidering Competence. *Journal of Philosophy of Education*, Vol.31. No.3, pp. 491-503.
- Hyland, T. & Winch, C., 2007. *A Guide to Vocational Education and Training*. London: Continuum International Publishing Group.
- IBF International Consulting, 2007. *Consultancy to Conduct a Tracer Study of Graduates of the Botswana Technical Education Programme*, Gaborone: s.n.
- International Monetary Fund, 2012. *IMF Country Report: Botswana, No.12/235*, Washington: International monetary Fund.
- Johanson, R. K. & Adams, A. V., 2004. *Skills Development in Sub-Saharan Africa*, Washington: World Bank.
- Johnson, B. R. & Onwuegbuzie, A. J., 2004. Mixed Methods Research: A Paradigm Whose Time has Come. *Educational Researcher*, Vol 33, No 7, pp. 14-26.
- Johnson, M., 2008. 'Grading in competence-based qualifications - is it desirable and how might it affect validity?'. *Journal of Further and Higher Education* Vol.32, No.2, pp. 175-184.

- Jones, P. W., 1997. On World Bank Education Financing. *Comparative Education Volume 33 No. 1*, pp. 117 -129.
- Judge, W. Q., Fainshmidt, S. & Brown III, J. L., 2014. Which model of Capitalisim best delivers both wealth and equality. *Journal of International Business Studies*, 45, pp. 363-386.
- Kaonaga, M., 2001. *'Will The Poor Go To School'? Cost Sharing in Zambia*, Lusaka: OXFAM.
- Kayawe, B., 2013. *Botswana turns to Zim for vocational reform*. Gaborone: Mmegi Newspaper.
- Lasonen, J. & Gordon, J., 2008. *Improving the Attractiveness and Image of Vocational Education and Training; In The Fourth report on Vocational Education and training Research in Europe. Background report Vol 3*, Luxemburg: Cedefop Reference Series.
- Lauder, H., Brown, P. & Halsey, A., 2004. Sociology and Political Arithmetic. *British Journal of Sociology Vol 55 Issue 1*, pp. 3-22.
- Lauder, H. & Hughes, D., 1999. *Trading in Futures. Why Markets in Education Don't Work*. Oxford: Open University Press.
- Lewis, T., 2007, 37:4. The problem of cultural fit- what can we learn from borrowing the German Dual System?. *Compare: A Journal of comparative and International Education*, pp. 463-477.
- Majelatlle, A., 2012. *2011 Population & Housing Census*, Gaborone: Statistics Botswana.
- Manders, J. & Goldsmith, E., 1996. *The Case Against the Global Economy*. Sanfrancisco: Sierra Club Books.
- Masire, Q. K. J., 2006. *Very Brave or Very Foolish? Memoirs of an African Democrat*. Gaborone: Macmillian Botswana Publishing Co (Pty) Ltd.
- McGinty, J. & Fish, J., 1993. *Further Education In The Market Place*. London: Routledge.
- Mfundisi, A., 1998. The formation and structure of government and its institutional relationship with the government in Botswana. In: *Botswana, Politics and Society* . Pretoria: J.L. van Schaik Publishers, pp. 162-172.
- Miles, M. B. & Huberman, A., 1984. *Qualitative Data Analysis: A sourcebook of new methods*. London: Sage Publications.
- Ministry of Education and Skills Development, 2009. *National Human Resource Development Strategy*, Gaborone: Republic of Botswana.
- Ministry of Education and Skills Development, 2009. *Realising Our Potentials: National Human Resource Development Strategy*, Gaborone: Republic of Botswana.
- Mogotsi, I., 2005. The Roles of the Public and Private Sectors in Botswana . In: *Economic Development of Botswana: Facets, Policies and Prospects* . Gaborone: Bay Publishing, pp. 102-118.

- Moore, R., 2004. *Education and Society*. Cambridge: Polity Press.
- Narayana, N., Siphambe, H. K., Akinkugbe, O. & Sentsho, J., 2005. Botswana's Economy - an Overview. In: *Economic Development of Botswana: Facets, Policies, Problems and Prospects*. Gaborone: Bay Publishing, pp. 19-21.
- National AIDS Coordinating Agency, 2010. *Progress Report of the National Response to the 2001 Declaration of Commitment on HIV and AIDS: Botswana Country Report*, New York: United Nations & World Bank.
- Neuman, S. & Ziderman, A., 2003. Can vocational education improve the wages of minorities and disadvantaged groups? The case of Israel. *Economics of Education Review* 22, pp. 421-432.
- Obok-Opok, A., O'mara, F., Chipeta, D. & Molwane, O., 1997. *Community and Employer Opinion Survey on Vocational Education & Training*, Gaborone: Republic of Botswana.
- Oketch, M., 2007. To vocationalise or not to vocationalise? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa. *International Journal of Educational Development* 27, pp. 220-234.
- Olssen, M., Codd, J. & O'Neill, A.-M., 2004. *Education Policy: Globalization, Citizenship & Democracy*. London: Sage Publications Ltd.
- Overeem, M., 2010. *Assessment and Review of Technical and Vocational Education and Training in the SADC Region and Development of a Regional Strategy for the Revitalisation of TVET: Monitoring Report on TVET in Botswana*, Gaborone: SADC & UNESCO.
- Owino, W. & Abagi, O., 2000. *Cost Sharing in Education and Health in Kenya*, London: Department for International Development.
- Penrose, P., 1998. *Cost Sharing in Education, Serial No. 27*, London: Department for International Development.
- Psacharopoulos, G., 1997. "Vocational education and training today: challenges and responses". *Journal of Vocational Education & Training, Vol.49, No.3*, pp. 385-393.
- Raggatt, P. & Williams, S., 1999. *Government, Markets and Vocational Qualifications*. London: Falmer Press.
- Randle, K. & Brady, N., 1997. Managerialism and professionalism in the "cinderella service". *Journal of Vocational Education & Training, Vol. 49, No. 1*, pp. 121-138.
- Reporter, S. S., 2007. *'Technical Colleges are not tertiary institutions'*. Gaborone: s.n.
- Republic of Botswana, The Department of Vocational Education and Training, 2009. *Annual Report 2007-2008*, Gaborone: Government of Botswana.
- Republic of Botswana, 1976. *First National Development Plan*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1986. *National Development Plan 6*, Gaborone: Republic of Botswana.

- Republic of Botswana, 1991. *National Development Plan 7*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1994. *Revised National Policy on Education, White Paper*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1994. *Study on access to vocational education and training for students with disabilities*, Gaborone: Department of Vocational Education and Training, Ministry of Education.
- Republic of Botswana, 1996. *Vision 2016*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1997. *National Policy on Vocational Education and Training. White Paper*, Gaborone: Government of Botswana.
- Republic of Botswana, 1998. *National Development Plan 8*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1998. *National Policy on HIV/AIDS*, Gaborone: Republic of Botswana.
- Republic of Botswana, 1998. *Vocational Training: Act No. 22 of 1998*, Gaborone: Government of Botswana.
- Republic of Botswana, 1999. *Tertiary Education Act*, Gaborone: Republic of Botswana.
- Republic of Botswana, 2003. *National Development Plan 9*, Gaborone: Republic of Botswana.
- Republic of Botswana, 2005. *Privatisation Master Plans*. [Online]
Available at: <http://www.peepa.co.bw/node/37>
[Accessed 19 September 2012].
- Republic of Botswana, 2008. *Towards A Knowledge Society Tertiary Education Policy: White Paper No 37*, Gaborone: Government of Botswana.
- Republic of Botswana, 2008. *Towards a Knowledge Society, Tertiary Education Policy*, Gaborone: Tertiary Education.
- Republic of Botswana, 2009. *National Development Plan 10*, Gaborone: Republic of Botswana.
- Republic of Botswana, M. o L. a. H. A., 1997. *National Policy On Vocational Education And Training*. Gaborone(Gaborone): Republic of Botswana.
- Robson, C., 2002. *Real World Research (Second Edition)*. Oxford: Blackwell Oublishing.
- Sala-i-Martin, X., 2011. *Six Common Myths in the Field of Economic Growth*. [Online]
Available at: <http://www.youtube.com/watch?v=i28cRfsKD-o> Notes: Columbia Engineering TEDx event, "Innovating Social Change," Columbia University
[Accessed 5/06/2013 June 2013].

- Samoff, J., 1999. Institutionalizing International influence. In: *Comparative Education. The Dialectic of the Global and the Local*. s.l.:Rowman and Littlefield.
- Samuel, E., 2009. *Presentation of the Botswana TVET system*. Gaborone, s.n., p. 6.
- Samuel, E., 2009. *TVET Systems in Botswana*. Gaborone: s.n.
- Sarantakos, S., 2005. *Social Research (Third Edition)*. Basingstoke: Palgrave Macmillan.
- Scholz, R. & Tietje, O., 2002. *Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge*. London: Sage Publications.
- Schostak, J., 2002. *Understanding, designing and conducting qualitative research in education*. Buckingham: Open University Press.
- Seal, C., Gobo, G., Gubrium, J. F. & Silverman, D., 2004. *Quantitative Research Practice*. London: Sage Publications.
- Silver, H., 1988. *Intentions and Outcomes, Vocationalism in Further Education*, London: FEU.
- Silverman, D., 2000. *Doing Qualitative Research, A Practical Handbook*. London: Sage Publications.
- Siphambe, H., Sekwati, L. & Tlotlego, N., 2009. *Report on the Situational Analysis of Technical and Vocational Education (TVET) in Botswana*, Gaborone: Republic of Botswana, University of Botswana (A UNESCO supported activity).
- Soros, G., 2002. *George Soros on Globalisation*. New York: public Affairs.
- South African Qualifications Authority, 2008. *Transnational Qualifications Framework for the virtual University for Small States of the Commonwealth*, Vancouver: Commonwealth of Learning.
- Statistics, U. I. f., 2012. *International Standard Classification of Education ISCED 2011*, Montreal: United Nations Educational, Scientific and Cultural Organisation.
- Stenbäck, T., Melchiori, P. & Thupagayale, C., 2000. *Botswana Country Report: Evaluation of EC support to the education Sector*, Gaborone: European Commission.
- Stiglitz, J., 2002. *Globalisation and its Discontents*. London: Penguin.
- Sunday Standard Reporter, 2006. MoE owed enough to defer school fees by 10 years. *Sunday Standard*, 3-9 September, pp. 1,2.
- Swanbon, P., 2010. *Case Study Research*. London: Sage Publications Ltd.
- Tarrant, J., 2000. What's wrong with Competence. *ournal of Further and Higher Education*, Vol. 24, No.1, pp. 77-83.
- Tashakkori, A. & Teddlie, C., 2003. *Hand Book of Mixed Methods in Social and Behavioural Research*. London: Sage Publications.

- Tau, D. & Modesto, S. T., 2011. Qualifications frameworks: implementation and impact in Botswana. *Journal of Education and Work*. Vol.24, Nos.3-4, July- September, pp. 359-373.
- Tertiary Education Council, 2005. *Tertiary Education Policy For Botswana: Challenges and Choices*, Gaborone: Tertiary education Council.
- Tertiary Education Council, 2006 August. *Tertiary Education Affairs*, Gaborone: Tertiary Education Council.
- Tertiary Education Council, 2008 March. *Tertiary Education Affairs*, Gaborone: Tertiary Education Council.
- Tertiary Education Council, 2008. *Annual Report 2007-2008* , Gaborone: Tertiary Education Council.
- Tertiary Education Council, 2010. *Corporate Profile*, Gaborone: Tertiary Education Council.
- The World Economic Forum, 2012. *The Global Competitiveness Report 2012–2013*, Geneva: World Economic Forum.
- UNESCO Institute for Statistics, 2011. *Global Educational Digest 2011 Comparing Educational Statistics Across the World*, Montreal, Canada: UNESCO Institute for Statistics.
- United Nations Educational Scientific and Cultural Organisation, 2006. *ISCED 1997*, s.l.: UNESCO.
- van Rensburg, P., 2001. *Making Education Work (Foundation for Education with Production)*. Gaborone: International Gaborone Botswana.
- van Rensburg, P., 2001. *Making Education Work: the what, Why, and How of Education with Production*, Gaborone: Gaborone Foundation for Education with Production and Uppsala, Sweden. Dag Hammarskjold Foundation.
- Velde, C., 1999. An Alternative Conception of Competence: implications for vocational education. *Journal of Vocational Education and Training*, pp. 437-447.
- VET, E. M. f., 2010. *The Bruges communique on enhanced European Cooperation in Vocational Education and Training*, Bruxelles: European Union.
- Wade, R., 1990. *Governing the Market, Economic Theory and the Role of Governments in East Asian Industrialisation*. Princeton: Princeton University Press.
- Walford, G., 1994. *Researching the Powerful in Education*. London: UCL Press.
- Wallace, M., Fertig, M. & Schneller, E., 2007. *Managing Change in the Public Service*. Oxford: Blackwell Publishing Ltd.
- Wheary, J. & Orozco, V., 2010. *Graduated Success: Sustainable Economic opportunity Through One-and Two Year Credentials*, New York: Demos: A Network for Ideas & Action.
- Wolf, A., 2002. *Does Education Matter? Myths about Education and Economic Growth*. London: Penquin Books.

Wolf, A., 2011. *Review of Vocational Education*, London: Department of Education and Skills.

Working Group Members under the chair of Professor F. Youngman, 2005. *Tertiary Education Policy for Botswana: Challenges and Choices*, Gaborone: Republic of Botswana.

World Bank, 1988. *Education in Sub-Saharan Africa, Policies for Adjustment, Revitalisation and Expansions*. Policy Study 9777, Washington. D.C.: World Bank Policy.

World Bank, 1991. *Vocational and Technical Education and Training and training: World Bank Policy Paper*, Washington, DC: The World Bank.

World Bank, 2007. *Strategy to Revitalize Technical and Vocational Education and Training (TVET in Africa*, Addis Ababa Ethiopia: African Union.

World Bank, 2015. *Botswana Overview. World Development Indicators*, s.l.: World bank.

World Economic Forum, 2012. *The Global Competitive Report 2012-2013*, Geneva: World Economic Forum.

Appendix 1: Research Permission Applications.

1. Application to the Government of Botswana
2. Approval permission for research
3. Letters to various government and parastatal departments

The Permanent Secretary
Ministry of Education and Skills
Development
P/Bag 005
Gaborone
Botswana

Mr I. D. Morris

Email: imorris@it.bw

8th July 2010.

Dear Permanent Secretary,

Please find my enclosed research permit application to conduct research in Botswana.

I have followed your national guidelines provided and therefore attached two sets of the following documentation;

1. Research permit application form
2. Copy of my British Passport
3. My approved University of Bath research proposal together with my considered ethical implications form.
4. My curriculum vitae.
5. A letter from the University of Bath confirming support of my research proposal.

I am most grateful for your consideration of my research proposal and should you require any further details I would be very happy to provide these.

Earlier this year I did meet with some of the senior management in the Department of Technical and Vocational Education and Training to discuss my earlier thoughts on my research proposal and this subsequent application is a result of these meetings.

I would hope that this research meets with your approval and that it may be of benefit to your Ministry as you continue reforming and expanding the tertiary education sector.

Yours sincerely

Ian Morris



TELEPHONE: 3655408
EDUCATION
TELEX: 2944 THUTO BD
FAX: 3655408
REFERENCE E 1/20/ VIII (25)

MINISTRY OF
PRIVATE BAG 005
GABORONE
BOTSWANA

REPUBLIC OF BOTSWANA

23rd July 2010

To: Mr I.D.Morris



RE: REQUEST FOR A PERMIT TO CONDUCT A RESEARCH STUDY

We acknowledge receipt of your application to conduct a research on how can Botswana sub degree vocational qualifications become a viable option in tertiary education when a majority of students and parents see the academic degree route as preferable or gold standard.

This serves to grant you permission to conduct your study in schools in and around Gaborone and Francistown to address the following research objective(s)/question(s):

To: examine the role of TVET sub degree qualifications within Botswana Qualifications framework and to see how they are, or can become viable alternatives to academic degree programmes.

It is of paramount importance to seek Consent and/or Assent from the Chief Education Officers, School Heads, Teachers, Parents and Students of the schools you are going to interview as well as administering a questionnaire. We hope and trust that you will conduct the study as stated in your Proposal and to strictly adhere to the Research Ethics. Failure to Comply, with the above Regulations will result in Immediate Termination of the Research permit.

Please note that this permit is valid for a period of one year effective from 02nd August 2010 to 02nd August 2011.


You are furthermore requested to submit a copy of your final report of the study to the Division of Planning, Statistics and Research, Ministry of Education, Botswana.

Thank you.

Yours faithfully

K.Mathabathi
For / Permanent Secretary
Mr Ian David Morris




Botswana Mobile: 72106027

RESEARCH STUDY: Examining the impact of tertiary policy on technical and vocational education and training in Botswana.

Dear Director 

I am grateful for your agreement for me to carry our research within your organisation. In this connection I have outlined below the questions and information which I am seeking. I would be grateful if I could either meet with you for an interview of between 30 mins to 45 mins max or you could direct me to one of your staff who might be best placed to answer questions within the areas described. Unfortunately I will only be here this week as I have to travel to Mozambique at the weekend for three weeks. However I will be returning if it is not possible this week so could make arrangements for a meeting at the beginning of November if this is preferred.

Yours Sincerely

Ian Morris

Research questions .

1. May I have a copy of your current or proposed organisational structure?
2. Can I have details or documentation regarding the current Grant/Loan methodology/procedures etc.
3. What are the current funding rates and grant/loan allowances? (Any difference from those published on the web site?)
 - a. Are the vocational areas posted on the web site the only ones where the grant loan will apply?
4. What is the allocation of grant loan to students by secondary schools and to which tertiary institutions?
5. What is the number of students supported in DTVET institutions under the grant/loan scheme?
6. What conditions if any are there in relation to their recruitment and support regarding the grant/loan scheme?
7. Are there others students supported under the GLS below certificate level entry?
8. What is the total cost of the grant loan/scheme predicted to be for 2010?
9. What are the projected targets for students supported under your scheme?
10. What is the projected size of the private sector in tertiary education and training?

11. You have begun some cost saving measures in your scheme but are you considering others?

Mr Ian David Morris

[REDACTED]
Botswana Cell: [REDACTED]
Email: [REDACTED]

RESEARCH STUDY

Dear [REDACTED] ([REDACTED])

I am currently conducting a research examining the impact of tertiary policy on technical and vocational education and training in Botswana. The following research questions are proposed;

- a. How is Botswana integrating technical and vocational education and training within their new tertiary policy and strategy?
- b. Can sub degree technical vocational education and training play an effective and efficient component of tertiary education and provide the skills and knowledge for artisan and technician levels in industry?
- c. How can a wider section of secondary school leavers, be encouraged to choose TVET sub degree qualifications thus meeting skill shortages at craft/artisan and technician levels in industry.

I have been given permission to conduct this research from the Ministry of Education and Skills Development (See attached letter), but you will see that it requests that I also seek permission/consent to conduct my study and research with each Chief Education Officer, Director, Institutional Heads, teachers, parents and employers etc.

This letter is therefore requesting this permission to carry out the research within your organisation, department, school, colleges or directorate. I would hope that the results might prove beneficial to the Government of Botswana and other countries that are presently grappling with this issue.

I have attached a copy of my research proposal and would indicate that this is part of a doctoral study with the University of Bath, England.

I would be very grateful for your support to this application and confirm that I will be following the BERA code of ethics during this research and will of course be very happy to provide feedback on my research progress as well as providing copies of the thesis on its completion.

Yours Sincerely,

Ian Morris

Attachments;

1. Letter of approval to conduct research study from the Ministry of Education and Skills Development. (23/7/2010)
2. Copy of research application to the Republic of Botswana

Further to your Email 12th October 2010

From my research to date I have been able to establish the names and details of students admitted to Technical Colleges on the BTEP Foundation, Certificate, Advanced Certificate and Diploma programmes.

I understand that many have been approved and support under the government grant/loan scheme.

The data I am currently trying to find is:

1. **Technical College admitted student BGCSE/JC results.** From these I should be able to establish the range of students that Technical Colleges are currently attracting. (Using the points system? They often look for particular examination results)
2. I also want to track their secondary schools and home village. In this way I can then deduce some factors on the backgrounds of students (Rural, semi-rural, urban etc.).
3. Technical Colleges are following an admissions policy but I am not sure how much this is influencing recruitment.
4. Clearly they are unlikely to attract (presently) students with 36 points or more as a majority of these currently are accessing the private and parastatal institutions although this may change as the Diploma-Degree is established.
5. Is it possible to track student results by Omang, through your own data base or is it easier to get the students to complete a questionnaire regarding the school results?
6. Is it possible to have details of how your points system operates so that I can be sure that what I have is correct? Best six results? 36+ points
 - i. A* = 8
 - ii. A = 7
 - iii. B = 6
 - iv. C = 5
 - v. D = 4
 - vi. E = 3
 - vii. F = 2
 - viii. G = 1
 - ix. U = 0
7. Examinations, Maths, English, Setswana, science double, Science, physics, biology, art, geography, history, English literature, Design technology, Food and Nutrition, Religion and Moral Education.

Many thanks for your help.

Ian Morris

Appendix 2: Transcripts of Interviews

23/9/2010	Interview 1
Questions	Response
<p>Introductions and outline of research. I informed the interviewee that this was the initial enquiry to clarify information and to establish progress on the implementation of the Tertiary Policy.</p> <p>One of the things, obviously I am going to talk with the TEC and BOTA about this later, but, hmm, clearly on the sponsorship err, they are talking about certificate plus isn't it? Well certificate as seen as tertiary. The real problem for them that they might have is that you are going to have some students doing BTEP certificate in some of the colleges and perhaps the Brigades, well that might be possible and they are not seen as tertiary institutions so are not entitled to the grant/loan scheme?</p> <p>Really.</p>	<p>The interviewee suggested that little change had taken place since I had left in March 2008.</p> <p><i>(General discussion on the Brigades takeover progress)</i></p> <p>Of course we may have to close some of the Brigades, because some of them are very small. You see we have to include some of the Brigades, you see, even if they are just one department you see. But you see of course there are going to be politics behind it you take a Brigade like, Tswapong, that's a very, very, small Brigade, but you see in that area there is no Technical College or other Brigades so we might have do something like, expand it with other Brigades so that is what we are going to do.</p> <p>Yes.</p> <p>Yes, but for now I will tell you what is happening, we are sponsoring them. We are now and we even include foundation level students.</p> <p>Yes</p>
With regard to the government sponsorship, how many students are now being supported under this scheme?	From May (2010) we are sponsoring all students even from BTEP foundation level. When the new Minister came in she said she wanted to give TVET priority and one of the first things she did was to approve this as she considered it important that TVET students were included. It was top of her list. So one of the things that she has agreed on is to sponsor students. All new students coming in will be sponsored.
Does this depend on what grade JC or BGCSE they have?	No, as long as they have an admission letter from us then they can be approved to be accepted under the government grant/loan scheme.
With the points system for the grant loan scheme I presume this may limit which schools the students will be recruited from and presumably rural schools achieve less well on JC/BGCSE results?	We've got away from the 36 points you know, we tried it last year and there were very few students with 36 points or more. No it doesn't matter. As long as the Technical College offers a place then that's all that matters. Then they are covered under the grant loan scheme.
Really? So even JC students are considered under the scheme?	Well students wanted to go to Limkokwing and other private providers. Yes all they need is an admissions letter from the College and so as long as they are under 30 years old, then they are eligible. This applies to all technical colleges. Yes so we wanted to get away from this 36 point thing. We process them at the colleges, all the colleges. What we did was then to compile the list. Mr B compiles the list and then we send it to them, and

	they open an account for them and do whatever is necessary.
So that has made quite a big impact on the system.	Yes it has we are going to be doing it each term as students are admitted.
So this started from May did it?	Yes from May this year (2010).
That is a big change? And I guess quite expensive?	Yes it is, but our argument was that these students were not going to pay tuition fees and also as most of the students are on campus, so they only get a small allowance so the cost is small. Yes you see students being students, once they are being sponsored that is all they wanted, yes was to be sponsored. There is status.
Ah yes I recall that students almost didn't mind which college or course they could do as long as they could get the sponsorship? So you are almost given equality? You are giving parity of treatment to all tertiary students whether at the University or the Technical College?	Yes. Yes, exactly, they like the status. Yes
Do we have a in the colleges a record of where the technical students have come from? Which secondary schools and what grades they have achieved?	Well I think Mr B may be able to help you there but possibly you would need to go to each individual technical college to look at the individual records. In fact I recently asked for the numbers of applications from students for BTEP as I wanted to inform the Minister of the continued demand for these courses. I think Mr B is gathering this information. You know we have employed two graduate interns to work with him in gathering the data and to collect data from the Brigades that have been taken over.
In the tertiary policy it speaks of equal opportunities and supporting disadvantaged areas. Do we have any information of the schools or the areas where colleges are recruiting students from? Yes I recall in 2000 we had 10,000 students apply for 36 places on the first BTEP foundation courses. Ok so that's a major change. Now let me look at my questions.	I, I think again at the colleges they will have this data I think, but ask Mr B. You know the other day I wanted that information from colleges, I wanted the number of students that had applied and then eventually how many were taken because then we can see how many who applied for BTEP. So I have asked them to provide that information. Yes so we are trying to establish un met demands. You see we have all these students who apply and they can't go anywhere. Often we can only take two groups out of five hundred who apply. Yes this is what they were telling me. Yes you imagine.
On the Brigades takeover how has that been progressing?	Ah well we have 21 Brigades to date but the lack of posts is preventing us taking over the remainder of the 42 Brigades and those Brigades we have taken over the staff have very low qualifications but we do not have sufficient money to train them to the required qualifications so some are being employed as technicians.
With BTEP I understand a review is taking place? But who is undertaking this? SAQA / TEC project?	Well we have placed a tender for this and expressions of interest. Now we have funds we think it will start sometime early next year. Oh we did have some people around asking questions but I am not quite sure what it was. But is that not the one sponsored by the HRD department? Ah yes we had one gentleman calling regarding that.
Where is QAA going to sit under the new O&M review or has it been	That is one thing that we are saying really needs to be addressed. The O&M has not been completed yet although the

discussed yet?	review was carried out but it is still out for consultation. But there are now changes that have been made. I think now the latest changes have been submitted to cabinet. Because we are also establishing the office of what is it called? Well we are going to be looking at the levels you see, all the levels in the education system. But you see with QAA, what we are saying is we can't have QAA as part of DTVET because it's an awarding body. Ah well it needs to be independent and away from interference. Now do we put it with the Examinations Council? We want it out from DTVET. Because where programmes are not validated on time they have it all there where I have had to say to the Head of PDD where a programme has expired we are not going to validate it.
Is there a new organisational structure from this one I was given 18 months ago?	Ah, what of, err yes this is what I have said well in part it has with some changes which are still being discussed. You see we do not have two three for policy we want to have it as one. Some of the departments under secondary and primary will be reduced. The proposal is to have one department for policy covering both primary and secondary.
Has the proposed O&M been implemented yet?	Yes but I suggest you talk with the PS regarding this, but what we are concerned about will be, what is left for DTVET once the four colleges have become Parastatal.
So there are some Changes then?	Yes.
Is NDP 10 available yet?	Oh yes let me show you. We only have one copy but it is available from the government printers. Available for P100. There are some changes.
Are there still challenges with recruiting and retaining staff?	Yes those challenges are still with us. Yes the vacancy rate is still very high, you see it is still difficult although we have made recommendations you see the package that we are offering them is not sufficient. We are not just sitting and our recommendations have gone through to Personnel, Recruitment and Retention.
General questions re department locations and staff movements.	<i>(Tape then stopped.)</i> Conversation continued and informed me that he had applied for early retirement and that Mr C and Mr D were also going. He suggested that he was just fed up with all the changes and small things that come to his office such that he cannot get on with the major issues. He commented that he was now being asked to make himself available for invigilating at the BGCSE exams due to staff refusing extra duties and overtime. He was of the view that it would be cheaper to pay staff extra as it would now cost the extra hiring of accommodation for the storage of examination papers and transport to and from secondary schools. His view was that it would have been cheaper to pay teachers an extra allowance. He was frustrated that he should have to go out and invigilate.
I thanked the Interviewee for his help and said that I would call back later once I had carried out the initial review and. literature search	
23/09/2010	Interview 2
Introductions and description of the research.	The interviewee also informed me that he was fed up with all the work, changes and had applied for early retirement.
Are the MTTC and CITF still under the Ministry of Labour and Home Affairs?	Yes it is presently, although it is proposed that they merge and move under the Ministry of Education and Skills I think.
Oh I will then need to request approval to research from the Ministry of Labour?	Yes.
Have they changed the apprenticeship in any way?	No not really. They did start to, but all the people involved in the project left I believe.
So the apprenticeship is just	Yes although the craft level was at Trade test C-A. Technician level

artisan level?	used to be carried out by the Polytechnic/ UB using CGLI but this was eventually brought in house.
Are students and parents similar to the UK in preferring to obtain a degree rather than vocational qualifications?	Yes they are.
How is progress going in implementing the Tertiary policy?	<p>There are some contradictions occurring between the Ministry and the TEC. This in relation to the breakup of the country into regions and zones.</p> <p>TEC in NDP10 have also recommended that SPTC start mining courses which is contrary to DTVET as we have never suggested this.</p> <p>Some of the private institutions are complaining that they have invested in new buildings and now the government is restricting funding of students.</p>
I see that some ministry staff have left?	<p>Yes, Mr E (<i>Formerly Head of the Grant /Loan Scheme</i>) is now with Limkokwing University as a senior manager. Some have moved to different ministries or retired early. Others have just resigned or gone to the private sector. Retirement used to be 50 but more recently consideration is give at 45. Mr F and Mr G have retired and Mr H is now a Principal at FCTVE. When the Director, I and Mr D (HR) <u>leave there will be no one who understands the TVET system.</u> Most are leaving for either the private sector or to Parastatal. Ah there is so much competition. What will it be like everyone competing for the same students.</p> <p>BUIST: I think is on hold presently, they spend a fortune on building a brick wall with face bricks all around the new premises. UB have asked where BUIST will get there students from? It's a real mess.</p>
27/09/2010	Interview 3
General talk discussion about education and vocational education.	
One of the things I have asked people is about the academic/vocational divide?	<p>Academic is faster than the practical way but academics need experience following study. They could then do an apprenticeship and then go through the workplace training. But you know some countries; they say you can enter Universities from different routes. The other thing Ian is that some countries are moving towards vocational secondary. I am discussing with Harvard presently, that at, at secondary they are suggesting that it is better to enable some young people to focus on vocational at a younger age. It is one area where some countries are focusing.</p>
The problem is would students want to do that? Generally it is only the lower achievers that want to do this? Because of the changing requirements of employment isn't there a danger in specialising too early?	The problem is; take engineering; it is very challenging and not really for low school achievers.
So you don't think Botswana will do this?	<p>The government has not made up its mind yet. But I think some schools could be converted to TVET maybe some of the Brigades? You really come from England Ian. You see Botswana modelled the British system. Many countries are saying, think about Tiger economies... They say what is the point of education if there are no jobs? It is important to train people for jobs rather than educate. Having a degree but no job is of no value. University degree requires skills and knowledge.</p> <p>Singapore for instance people are beginning to say, "what is the</p>
Ok I can understand that.	

	<p>point in training people to be lawyers if there are no jobs for lawyers'. What is the value if there are no jobs after University? Others say.....</p>
<p>But many young people don't want to do vocational at school level as they think it will restrict future progress? General education enables more flexibility?</p>	<p>Yes this is true. However as the burden of cost rises?</p>
<p>Yes I see that Botswana has one of the highest expenditures on education in the world and I wonder how sustainable this? Now I see that Botswana has agreed to fund all BTEP students under the grant/loan scheme and this may have opened the door to a substantial cohort of student which are not in the upper cohort. The trouble is I wonder if Botswana can afford it. In private colleges students need to meet the points system but in Colleges provided you gain admittance then you can be supported under the grant scheme. Of course with a points system you can control entry but once it does not apply as in the colleges then there is danger of corruption?</p>	<p>Yes it does</p> <p>No it is not sustainable.</p> <p>This is not something I was aware of?</p> <p>Oh is it. I was not aware of that. Yes this could give rise to corruption? Yes this did happen in 2000 and ... before in the past and there was chaos.</p>
<p>If I could move you a little bit from this to yourselves about BOTA. Will this, is it intended that BOTA will be fully funded from industry?</p>	<p>Yes this is BOTA.</p> <p>Yes it's a good question. The reason for this. The law empowers BOTA to collect a levy but it does not force anyone to train. BOTA is clearly looking at skills in this structure..... TEC diagram.</p> <p>The law makes it a requirement for all industries to pay a levy, but Industries are not required by law to train. That is why the levy at the moment is 2% but companies can claim back some money if they carry out training, because of that we cannot be genuinely certain whether or not the levy is making an impact. Some companies do want to get their money back and so will do training but this is not necessarily the case.</p> <p>Those that we have audited they have not carried out useful training. Sometimes they have just done any training just to get their money back. But ideally the levy system was going to raise money for training for funding training but some money will come from the government we just want to encourage training in industry.</p>
<p>In the UK most of the Levy system disappeared under Margret Thatcher. Actually not every company did carry out training but companies like Rolls Royce and British Airspace for example ran their own training apprenticeship schemes. Often they trained</p>	<p>Yes so whether we will be able to sustain training under the levy system is still not clear. But the levy is here to stay.</p> <p>Now the TEC also has been talking to us informally that we should</p>

more than they needed but this was good as these young people could go elsewhere.	perhaps consider the scope of the levy to cover other areas of training whether we can cover courses beyond our mandate. Actually as we speak we do finance courses above our mandate those at diploma level. So I am in agreement with that because there are some companies who have paid the levy and they will benefit from this for sending some people on long term sponsorships. Yes so I am in agreement with this.
Yes actually in the UK we have struggled even with the NVQs a recent report has been quite critical of these qualifications. Yes Prof Wolf has written extensively about this.	Really, I would be interested to see that.
If I wanted to get some details from BOTA about how many companies are carrying out training? Oh that is disappointing.	You can get that from me but if you give me your email then I can send it to you. Yes Ian for you I can get this although it has not been published yet. Yes I will send it in soft form. (<i>searching for it</i>) Yes this is the one the breakdown of... Look only 464 companies have sent in claims out of 8,000 companies. That is only 2%. Some training dubious.
Really? That is better than the UK. The VAT in January will be 20% up from 17%.	Yes that's the point yes we submit this to the board. If the levy would pay for the whole training then we would need to look at a threshold. Because at the moment the threshold is about P500, 000. Now last year the threshold was P250, 000. So we had more people paying to the levy. This time around we have less people paying to the levy but it is a small percentage. But VAT has been increased to 12%. So the levy has not been increased but what we would see is as the economy progresses because the projection for economic growth is almost close to 7%. Yes because one thing, well the UK is not doing badly. Wow 20% is on the high side. So for us to cover all the skills in development in this area using the levy.
So although you have 8,000 companies registered not all of them are paying the levy.	No, no this is the statistic from last year as of the 31 st march 8,000 companies paid the levy. Yes there are more companies than that in Botswana but only 8000 that were eligible to pay. As of the 31 st of march next year there will be fewer companies eligible to pay the levy because of the threshold. We normally provide an update to the board. For you Ian I can send you this report and the breakdown of information. You can see 8,000 registered and paying levy and only 460 claims. If the levy would pay for all levels of training then there may be more training.
You also had a system where assessors have to pay a registration fee?	Yes that is still continuing and we call them trainers and is a one off fee. Yes trainer/Assessor. The reason is we have two provisions for registration, one is for trainers and the other is for assessors.
Yes I understand that there is a quality assurance aspect to it?	Yes you pay one fee for registration in either of the categories. Because we simply said a person may want to an assessor rather than to be a trainer particularly in work place training, people may decide they do not want to train but want to assess. So that is on-going.
Then there was something I recall about students paying a fee?	Yes we call it a hook on fee of about P50. This just puts them on the data base. And this hook on fee is sometimes paid by individuals and at other times by institutions or by employers. Yes that's on going as well.
So from that you would have a record of how many students were undertaking training?	Yes exactly. Yes we want to link it with the Omang ¹⁰ . So we are upgrading our system.

¹⁰ Omang: Identity card

So I can establish how many student are registered and how many assessors?	Yes I can send it to you.
So which students are excluded from registering with BOTA?	If they do any course above our mandate they do not register with us but if they do a course at our mandate they must register with us.
So if they were doing BTEP would they register with you?	Yes they would register with us.
So up to diploma level? Let me draw you back to my questions.	Yes exactly.
Is it the intention that this Skills and Training would eventually be fully funded by industry?	It is a good question. The reason for this is the law makes it compulsory for companies over a certain size to pay the levy. However it does not require them to carry out training. The thing is you are not forced to do training and you may decide as a company not to do training but rather you put up your service charges to cover the cost of the levy. This is happening.
You are running a levy system. What proportion of your training is now covered under this levy in companies?	The levy is 2% right now. Institutions (interruption by sec) that's what is happening. Because of that we cannot be genuine certain whether the levy is having any impact. Some companies just want to get their money back So they will try any dubious means to do so.
In the UK we failed rather in encouraging companies to invest in training.	Some companies do train but there are not many of them but those that we have audited, we have found that not much of the training they have done is useful for the country. But the idea, ideally, the levy was going to bring some sponsorship from industry. If people were going carry out training then..? Now coming back to this question as to whether the training in companies will be paid under the levy I cannot say at the present. In fact parts of the training would be through the levy because the levy is here to stay. Informally discussions have been taking place with TEC as to whether courses above our mandate could be covered from the Levy. We do finance courses above our mandate. So I am in agreement there are some companies where they would benefit from supporting long term sponsorships. So that these people could come into senior management positions.
If I wanted to get information on the companies who are registered.	Yes you have my email number and just contact me and I will send you any details that you require.
Has the apprenticeship been modernised? It currently sits under the Ministry of Labour and home affairs? I have a lot of affection for the apprentice as I was one.	The apprenticeship has it been modernised? No. the question is who is driving it. Yes but it also sits under our mandate. You see we call it work place learning. It is a form of work based learning. As it is a significant form of training and used in other countries we should have given it more emphasis. Yes so was I It is rather a muddy system as Brigades were doing the apprenticeship scheme as well. Training with work. Ha, Ha yes it was discredited. What will Brigades continue? They will continue with B and C until we can reform. We are hopeful that through our mandate we can run a proper apprenticeship programme. Because we need to revamp on the monitoring. The lack of monitoring. As the Germans pulled out there was a lack of direction. MLHA/MTTC concentrated on examinations and forgot log books and monitoring. Actually that is what we want

	to do is to bring this back.
I see that you are now doing standards development funded by the European Union?	Ah yes that is stalling and I want to put money into this project and for it to come to a conclusion. More standards and... the curriculum and in my view it is an area that needs attention. My department wants to do this. An apprenticeship is important. Ah yes you are reminding me that I need to do something on this.
In some countries they have craft, technician and graduate apprenticeship apprentices do you think that might be appropriate for Botswana?	Well we have currently artisan. We used to have technician which was a CGLI till it was taken over by the Polytechnic and then UB. In this country we have found that graduates come back and do the artisan. A few come from the university. There is a view that I have a degree and expect to work at a higher level. The key is quality. Through registration and monitoring. We ask for a lot of information. Monitoring visits. We have a division who do this. One formal and one random.
What have been the main challenges for BOTA during these first few years of operation?	You are asking me who is part of the team. There will be no BOTA. I will tell you. Budget and financing, planning and research. Development and work place training services. Another for QA. This is a proposal and is not yet approval. Mr J can tell you about this. He is the chair for the HR resources.
What is BOTA doing to achieve a High Skilled knowledge society?	So we are migrating to this new structure. Workplace will be standards development. Unit standards. Similar to NVQs all most the same. Sectorial committees. These are the ones which will be developing these.
	If you need anything else just call or email me. Here I will give my home number; I know that with research it is difficult.
I thanked Mr I for his open and frank answers to my questions and promised to let him have further information on my research as it progresses.	
2/11/2010	Interview 4
Well thank you so much for making the time for this interview	No problem
I was quite familiar with the Grant/Loan system as of 2007 but I understand that quite a lot of things may have changed? Even the name?	Yes there have been changes. Yes it is called, 'Tertiary Education Financing'.
Is it possible to have a copy of the new organisational structure?	Well it is still changing but I will see if I can find something for you.
Does this mean that you will do more than manage the grant/loan scheme? Well that is very encouraging.	For now we are still just dealing with students, but perhaps in the future we will do other things. We are reviewing some of our policies; say for vocational students, which I think you are interested in. Rather than limiting the number of student as we do in other tertiary institutions, in Vocational Education Technical Colleges, we are saying that all students who meet the technical college entry requirements will be supported under the grant loan scheme. You see the government runs the Technical Colleges so we are funding every student who gains admission. Providing that they have met the college course entry requirements.
Have the arrangements/ categories for funding changed at all?	Well we are still working with that but we are also reviewing the categories. This is now completed and the recommendation will be sent to the PS for consideration.
Is it possible to get any information of these recommendations?	We can give you a copy of the review. There are many ways of offering sponsorship but we really need to target those Batswana who really need support.

In 2007 when the tertiary sector expanded to include the private sector I think you were using a points system... err, 32 points?	<p>Yes we are still using the points system.</p> <p>Yes 36 points. The report is suggesting. (Interruption by mobile phone call) as I was saying, they are suggesting that an assessment needs to take place where we will be assessing to see where those Batswana really need support. You see presently we are supporting everyone and many who are already well off and the assessment will now target deserving Batswana.</p> <p>I think you should be able to get some of these things from the report.</p>
So it's going to be much more discriminating in future?	Yes that is the case.
I see from your web site that you have now made some cost saving in the grant loan scheme. Could you enlarge on this?	<p>Yes we do not pay for resits and retakes now. You have to pay for yourself. If you fail a module you pay for yourself.</p> <p>Those Parents could in the past send students to higher education some time in other countries from their own resources. For instance I send my child to the UK and then I find I cannot pay for the second year, they would then ask us to pick up the charges for the second and third year etc. This is unfair and we have cut down on some of these. Now we are saying that this is unfair and only the rich are benefiting. We are now saying that if you have failed a year, have to re sit a module we call them hic ups then we are not going to support you. If you have benefited before from the grant/Loan scheme then we have substantially reduced the number and you are less likely to be supported again. We only support those who had to re-sit or retake due to illness etc. If you dropped because of your own fault then we will not assist.</p> <p>A majority of the students we have taken on this year are fresh.</p> <p>Very few of the students have received support before. We have cut down on the number of students who have been supported before. We can't go on giving support to the same students.</p>
Now previously I think you had categories 1-5 and this would depend on the subject and amount of support is this still the same?	Well yes it is although we are reviewing it presently.
Could I have the latest details on how many students you are currently sponsoring? You mean fresh students?	<p>This year so far we have sponsored 8,016 students locally, 16 local overseas transferring students.</p> <p>We have not supported any this year.</p>
So most are now going to local tertiary institutions?	<p>Overseas we have 19 top achievers and 25 on scholarships. 15 went to India and 10 went to Japan.</p> <p>Maximum of 100 within the region, yes South Africa.</p> <p>The bulk of students will be sponsored locally.</p> <p>This is a change from the past. If we send more students locally then it cost us less so we can then sponsor more students.</p>
<p>Now with Technical Colleges I think they told me so far that they have 500 students sponsored. Is that about right?</p> <p>That is very encouraging and will encourage more able students to apply to technical Colleges as they will receive the</p>	<p>Err. Yes, 500 so far but I think this is going to increase they have estimated 2,700 students from Vocational Technical Colleges and we had planned that they would be given sponsorship. Because it was a special dispensation by the Minister (In May this year). So we expect to sponsor more in January.</p> <p>New students will be sponsored for all levels.</p>

same sponsorship as all the other tertiary institutions Most encouraging.	Yes this is important for us to support out Technical Colleges.
Can I just check for how many years the sponsorship will apply? Sponsor for one year or all years?	Current students are not affected but all new students will be sponsored for all levels.
What I have from DTVET is the names of students sponsored this year and their dates of birth.	Ah yes that will be for the May and September intake. January will be some more and we are aiming to sponsor all of them.
One thing surprised me is that apparently all students are sponsored even at BTEP foundation level?	Under this basically what we have agreed as long as you have admission letters. Our understanding and the interest of the Minister we are sponsoring technicians. Because of the interest of the Minister we are supporting technician training.
So the 36 points does not apply, there is no cut of point?	No as long as the student has gained a place at the Technical College they will be sponsored. As long as you are offered a place at that college you will be sponsored. Even if they are admitted at foundation level they are still progressing up so we sponsor them.
Are the artisans under the MTTC programme considered under the grant loan scheme? Of course some of them are employed so would not be in scope?	No not those employed but If offered a place through the Technical colleges we are recognising them and will support them.
Are the vocational areas listed on the web site the only ones currently being sponsored? Well that is most encouraging.	Yes that is right. Yes they are.
Can you provide a breakdown of students sponsored by institution?	This would be the Examinations Council. Until this year we did not have a direct link with them but in future we expect to have a direct link so that we can look up student results to confirm what they have told us in their applications as this is not always correct.
I want to track what their qualifications are before they enter the Colleges?	Yes the Examinations Council keeps the data on Junior and even Cambridge students, whether they have o levels or not. They should have BGCSE. But because it was the first time, we will go on refining it. Our link with examinations this year did not up load the qualifications but going forward it we would be more comfortable with a direct link taking directly from their data base. If we have this we will be able to look up student qualifications directly. Check for sponsorship will be easier as we have the data based, modified certificates are not always spotted because the data base is not always up to date, so we are delayed.
What spread of young people are being admitted?	Our society still use TCs as lower but once everyone recognise that you can also gain sponsorship then the status of the technical training should rise. That's my opinion.
I was also interested in the costs of supporting the Technical College Students on the grant Loan Scheme?	Hostels must be filled up first before the additional money is given for off campus. But now it is catching up on them, since last year changes in on campus and off campus financial support has become much closer. We have reduced the gap. P 1200 on campus can buy on campus or off campus. P 1400 off campus.
I understand that projected targets over the next few years by 2016 18/19% they have exceeded that already but at what level will it funding be capped.	I think because of the economic downturn we will work according to the budget so will work on that. Depending on finance we may vary sponsorship according to money available. We stopped other educational projects and used this money to sponsor students. So far we cannot estimate how many future students.

I recall that in 2007 students often preferred to go to the private Universities and Colleges as they did not have hostels and therefore had more grant money. Is this still the case?	So far but at the University we are giving them the allowance so that they can choose to buy food on campus or off campus but we are working at normalising this across all students.
So where Technical Colleges have hostels and internal catering students will only have the minimum grant?	Yes that is right.
Are you still paying all students through the Bank?	Yes we are paying students electronically through the FNB Banks.
Well thank you so much, that has been most helpful. That's covered everything I wanted from you. Thank you If I can just have the copy of the Grant/Loan review that would be great.	
7/10/2010	Interview 5
What is the purpose of the Graduate Scheme?	General Notes: + hand out. The Internship for unemployed graduates commenced in August 2008 and the Department was formed in February 2009. Initially placements were in Public Service departments and then expanded to the private sector. The purpose is to bridge the gap, the market needs of employers. There had been some criticism by industry of graduates not having the appropriate skills for industry. Although no time limit has been set for the internship it is normally considered 12 months to two years depending on the experience required.
So the employers do not have to pay anything?	No the government pays the graduate an allowance of P2000 per month of which 1,800 is paid to the student and P200 is retained to provide an end of the internship bonus and which can cover any losses that might have been incurred by the graduate (i.e. theft damage etc.).
The Government of Botswana is very generous in its funding of students and perhaps students do not always appreciate this?	That is very true, but what the internship is designed to do is to improve the work ethic.
The employers are of course paying a training levy but I understand that this cannot be used for the graduate level?	No that is correct it is intended for the artisan level.
I understand that unfortunately little of the levy money has been used by employers for training?	No that is why there has been some discussion as to if the training levy could be used at a higher level within industry.
How many graduates are on the scheme currently?	In September 2010 there were 2,300 graduates on the scheme.
And what are the difference between government and the private sector take up of interns?	90% of which are in government institutions.
Do you have any idea what the total cost of the graduate internship to government?	A budget of P 63 million for this year (2010) has been set which excludes the administration costs.
Do you have any idea yet as to the value of the scheme?	It is still early days and no formal evaluation has taken place yet. However I (the Director) did believe that it had improved graduate employment skills and enabled some to obtain employment although the numbers were difficult to establish yet.
Is there a target yet set for the number intended to be	

accommodated under the Internship programme. What I mean here is under the Tertiary Council the number of graduates is anticipated to rise significantly and this may then lead to more graduate unemployment?	As for now it is anticipated that the scheme will be able to accommodate 3,000 graduates annually although figures go up and down as some leave or gain employment.
Attempted to elicit views on the expansion of Tertiary Graduates and the ability of MLHA's graduate scheme to cope with this number.	Coming back to the allowance for graduates we are still within the budget this year and with numbers enrolling and then leaving either for work or to other reasons we do think we will be able to maintain within budget. <i>(Something about graduate teachers.) The Deputy pointed out that they were also supporting some graduate teachers through this scheme where an oversupply of teacher graduates had resulted. Note? I am not sure if these graduate teachers are just achieving certificate level or if they are also degree holders? It points out the problem that they have been training too many teachers. This has only just been realised 2006 I think. Up to that time they were absorbing all the teachers they could train. (Little thought had been given to the system ultimate capacity)</i>
Is it conceivable that this scheme could be moved to the Ministry of Education and Skills?	<i>Great laughter.</i> No this is more about employment. No we do not think it should move.
Can Botswana afford all this cost of education and then internship?	Yes it is expensive. But the government is doing a lot in terms of empowering its citizens.
I understand that many graduates leave Botswana for other countries?	Yes that is true but that is why there are so many schemes to help graduates start their own business here. CEDA loans for citizens... young farmers etc. to enable graduates to start new business. Also the Department of Youth to Employment support young people and graduates in economic empowerment, single women etc. It is powerful programme of the young people.
I would like to thank you so much for your time in answering my questions. I will be providing you with a feedback on the progress of my research but it will probably be next year before I am likely to conclude the field work. Yes I am finding it interesting because it is a problem that many governments are facing. Nearly all young people want to obtain a degree. Yet many countries are finding skill shortages at artisan and technician levels. Many thanks again.	
7/10/2010	Interview 6
There are just a few questions that I would like to ask about the apprenticeship scheme and I am not sure if you are someone else would be the best person to ask regarding the number of apprentices? And the number of apprentices with companies and those who are not but are doing the NCC qualification through the Brigades or something like that? Is it possible to get those statistics?	<i>General Notes: Revising the curriculum into competence terms. Hope to complete by 2012. Only considering Artisan.</i> Err we can get those statistics from the placement office.
If you could give me the name of the contact person it would be helpful as I am only here for a short time?	Err yes I will see what I can do.
Has there been any discussions	Actually what we are doing is we are revising the curriculum from

or talk about revising the apprenticeship scheme or updating it?	the traditional to the competency based training.
Will your Department remain with the Ministry of Labour and Home Affairs?	No plans yet to move to MoESD may yet remain with MLHA.
I understand that MTTC and CITF are planned to merge?	Yes this has been agreed but presently discussions on organisational structure and HR are taking place. No date has been set for this merger to finally take place.
I understand that you started with support from the EU in developing the competency programme?	Yes that's still on-going yes.
How far has this gone? When do you think you will be complete?	We aim to complete in 2012. Yes when we will be rolling it out to the colleges etc.
Is it likely to remain at the Artisan level? I mean some countries have technician and graduate level apprenticeships but you have no plans for this?	Yes. We haven't come to that; we have no plans to do technician or graduate apprenticeships.
There is talk within the government reorganisation that maybe MTTC will transfer to the MoESD?	Well err it is presently with MLHA but some do feel strongly that we should move to education. But because it is based mainly on industry it is felt that it should remain with the MLHA.
So there is no clear decision yet?	So we don't know and It may eventually move but right now we are still under MLHA.
The other thing that I had heard that there may be a merger of MTTC with CITF? When will this happen?	Yes this is correct.
Will it be at the end of this building programme?	Well err it still an on-going process, we are currently holding a series of meetings err towards that. We are looking at the programmes and we are looking at the staffing establishment and we are also looking at the proposed institution how it's going to operate. So err even then we are not sure when it will be complete, but the sooner the better because it has been going for two or three years now.
I guess that Mr O the Director of CITF is working with you on that?	Yes Mr O. So there is no action on it. It has gone through parliament, it has been approved but is waiting for the implementation and now it's just the logistics how we are going to merge the two institutions.
Going back to the apprenticeship scheme because the key thing that I would like to get hold of is the apprenticeship and of the need to establish a strong scheme. What things are you doing to ensure that the apprenticeship scheme remains a strong and vibrant component of vocational training?	We engage the industry in the development of the unit standards, currently they are helping us with developing the unit standards and they are even chairing the subcommittee, because we would like to develop the curriculum which is close to the industry needs. We also have a monitoring unit within MTTC so that we can go out and see the progress of the apprentices out there and err even in the setting of the examinations we involve the industry so that they see that everything is in order.
In one of the reports looking back there was a fairly critical report of the apprenticeship scheme which was a review of the NCC which points out the	Yes we have improved that aspect because we have tried to print more log books to make sure that every apprentice has one. Err we

lack of monitoring so things have changed since that review? Lack of issuing log books and err and inadequate monitoring?	may still be short in going out as we only have two people in that section and you can see that Botswana is a very big country so even though we sometimes reinforce with other people to assist we don't do as much as we would like but we have improved.
Ok. Coming back to the point about the number of apprentices that are employed and others that are doing the qualifications which are not the same?	Yes there is a difference the apprentices and then the trade test C and B. the trade testing system is at intermediate level and then the NCC which is apprenticeable. The trade testing works in two ways, one is where they work full time at the Brigades, they spend two years at the Brigade and they get Trade test C, then they spend another year to get Trade test B and there are some Brigades that even continue after that for another year to NCC. So they don't have companies, they don't go to industry but they do projects instead. And then the other part of the Trade testing system is to the industry. There are some people who are out in industry they have been working for many years so, we do what is called recognition of prior learning whereby we get someone maybe after three years' experience in industry then they can be trade tested. If they pass the examination then they are awarded the certificate.
What about when you are doing trade testing. In some countries this only covers the manual practical skills but does not cover the theoretical knowledge and understanding that is required to do the job? Do you do both at the same on a trade test?	We do both but that applies to Trade Test C level because if someone does not know how to read or write they can be trade tested on the practical side so they just get a practical certificate.
So that is purely practical? So they wouldn't get a full apprenticeship with that?	Yes. No they would just get a certificate for the skills that they had achieved. But for trade test B you have to have everything with theory and practical.
No I understand that historically in Botswana this training was the only vocational training available and there were few employers so there were limited apprenticeships available. So to compensate through the Brigades training it slightly blurred the value of the apprenticeship? As I recall some criticism was raised over the quality of practical projects in Brigades. Would there be any value in separating the two and having a smaller but more quality assured system of apprentices in companies and then a separate scheme for those who do not have the industrial experience?	Well we have not thought of that so far but it does sound viable.
Because DTVET is taking over the Brigades aren't they and they are suggesting that in some of them they will be putting starting the BTEP qualification?	Ok I get your point. It could affect if Brigades are taken over and BTEP is brought into the Brigades to phase out the B and C qualification. Then it is going to greatly affect the training aspect.

Of course that is very different from the apprenticeship scheme. Would there be a loss in students doing the NCC if more gravitated to the BTEP rather than doing the certificate C and B?	But what we have seen also so far because BTEP is running in the Technical Colleges. Some technical Colleges are still running the apprenticeship.
Well I understand that the problem was that the development of BTEP was so slow that Colleges were reluctant to change from NCC with no progression route available?	We really hope that the Brigades will not phase out the trade test system so although some will run BTEP but we hope that some will continue to offer certificate C and B. Of course the Brigades do not just do theory they do a lot more practical training so it's more related to the apprenticeships.
But when I read the Brigade takeover document, it said DTVET was only taking over the training part of the Brigade and not the production component?	That is true and this can impact on our training and so they may have to focus on NCC rather than on trade test B and C.
Now BOTA have introduced a levy system. Has the levy system made any impact on the amount of training or apprentices that employers are taking on?	I think it is making a difference yes.
So numbers are increasing?	Err yes but it's only that some companies were not aware of the scheme. Now that they are aware that is when they are genuinely training apprentices.
I presume that companies are able to get some money back for taking on apprentices?	Yes that is true, but initially they were not aware of that and they thought that they would only be spending money on someone who would leave their company after training, but now they know that there will be a benefit.
So the levy system is helping you think?	Yes.
Do you think that the statistics that I may be able to get from your colleague will indicate a rise in the number of apprentices?	Err I think yes, because now we are even having a backlog of applicants for the scheme. Yes there are more people applying now. But there are limited spaces.
One of the complaints from the colleges is that when they are given the list of possible students from you that the list is not the reality and is not up to date?	Well I do not deny that this does happen sometimes but you see that by the time they are invited to a college some have possibly taken time out and are not available. But normally people would apply for a number of vacancies. Then the first offer they take.
But I presume these apprentices are employed by a company so where is the problem?	Well some are large companies and some very small.
Of course with a very small company they may be able to give very little practical experience to the apprentice?	Yes and they enrol less apprentices and you find they employ only one or two apprentices.
Let me just put it to you if a company is just replacing tyres would they be able to take apprentices?	Yes that is true because we try to align their work to the training. When an apprentice applies we take time to inspect the company to see if they have really if as you are mentioning motor mechanics if they really do the motor mechanics there or just part of that and then we check if they have someone who is qualified to train the

	apprentice along the way.
Ok thank you. Do you have an organisational structure at the moment?	He, he, err I can look for something.
And again if you can put me in contact with the person who handles your statistics that would be very helpful	Yes we can get you some statistics
Well thank you so much for answering my questions. I will let you have a copy of my finding in due course.	
<i>Note: In the event the person who had the statistics was unavailable and no statistics were provided</i>	
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I provided a copy of the proposed research and briefly described what it was about.	
Ok so you were just saying that you've got a different attitude about... Exactly.	Yes particularly on the sub degree. Because you see... my way of thinking now is that... Botswana should change from emphasis on academic qualifications ... You know now if we... that's why I think sub degree no...no... no I think Ian has got it wrong that's the only thing... he needs to change... the sub degree that's the only problem I have with it, the rest is ok.
What I would say to you is that this is only the working title of the research. But really it is a problem which all governments are facing at the moment that increasing numbers of young people and their parents want their children to do a degree, go to University rather than do Vocational Qualifications But it is making a big shortage in industry of artisans and technicians. So they are all rethink their policies about this? So what I am looking at is what policies should Botswana, or any other government for that matter introduce to increase encourage or provide more incentive for more able young people to take TVET qualifications and fill the shortages at artisan and technician areas?	Yes, yes. You see. Hmm.
That is why they have the Graduate internships? You are exactly right.	Hmm Artisan and technician areas... the issues really now a days you know is all these degree holders from our local University with a population of just below 3 million they cannot get employment. Yes but why do they have that graduate scheme because they have a curriculum which is not suitable for the country. You produce people who cannot be absorbed by the industry, who cannot go and market themselves cannot find employment or make employment. You see that is the challenge. I am saying we always you to say have a qualification or another qualification but I am saying we must move away from this academic curriculum, you see that is the challenge. You see we must be looking at competences If someone goes to an institution he must acquire competencies, there should be more emphasis on competencies. Not to acquire more paper qualifications, you see people have

	<p>degrees, masters, doctorates, they've got junior degrees err diplomas and whatever you name it, but they cannot perform, but they do not have competences. Why because they don't have the competencies of what they learn.</p> <p>But they cannot find jobs, yes exactly.</p>
<p>One of the things with the Tertiary policy here is that they have opened tertiary to the private sector here but we don't know what competencies if you like they will be achieving.</p>	<p>Well the key to that is having standards. Let industry develop the standards. And each and every institution conforms to those standards. You look at the standards they are just like the curricula you can review it. Once the government is diversifying the economy you look at the diversification indicator which will now lead you to review your standards and to what is needed. That is the key to me... a lot of things oh by the way We are merging with MTTC, yes, yes.</p>
<p>Yes I was going to ask you that anyway.</p> <p>Is that Mr A?</p> <p>That sounds logical.</p>	<p>Yes we are merging with the MTTC. Now with the committee that we have I am saying emphasis should not be on academic qualifications. Immediately you bring in this academic qualification it takes us twenty years back, because by the time we realise we should not have taken that route it will be too late. You know that when we established BTEP I was part of that, I openly admit that I was part of the problem at DVET when we developed the BTEP and so I am partly to blame I was part of the team and whatever the decision we make as a team. No need to isolate somebody I am also to blame for the BTEP No we made a mistake, If we make a mistake then we must take the blame we all made mistakes So no I we make mistakes, You know that the new Director when the new Director was appointed he is on the board, so he was interested in what we were doing. I had a one and a half hour meeting with him just to put him in the picture, yes Mr A and it came at the right time because, the Palapye, the University Project and other projects in Palapye were coming in. Now I had a meeting with Palapye Technical College and the Brigade there as you know. I had a meeting with them as I like to be proactive, so I said, Gentlemen, and I asked the Principal, 'what plans do you have for this project'. The Palapye project is coming, and I was saying, hey guys.</p> <p>I went to as I have to know what projects are taking place, that what I am paid for.</p> <p>Believe me we were in the meeting and they said no they said we are just going to continue training as we have always done. I said No. They said what do you mean Mr O? No it's wrong, you are here in Palapye we have to meet these people, go to them, those contractors those who are coordinating the projects and find out what the number of artisans that will be required.... Now they were shifting the blame to the MoESD. They said no we can only do that if the MoESD is telling us. I said that is wrong, you should be telling the Ministry. I will only agree if you can produce a document tow pages where you propose to the Ministry that these projects are going to need so many artisans, now you need to double the capacity you need money, that when I can agree to you but so long as you have not done your work Mr Principal.. You have not done your work. Call the board this project is coming and there is, there is going to be a demand for semi-skilled and skilled artisans. Don't wait for the Ministry to ask you, because by the time they respond.</p> <p>It is the same with you; you (Palapye Brigade) are in a better position because you have less government bureaucracy. You just call the board tell them that this is the situation, these projects are coming and there is going to be a demand for semi-skilled and</p>

	<p>skilled artisans in particular in... you responsibility as coordinator is to come up with a strategy and present it to the board. Don't wait for the board to ask you eh?</p> <p>You see that what I say, the same principle that I was saying to technical colleges don't wait for the Ministry to ask you because by then you, these projects will be coming to an end, finish so you must be proactive. This was six months, I came back and we began making our proposal to the board. We submitted to the board and asked them to give me money to begin the training, and I have continued to work with them in Palapye. I had already predicted what we required.</p> <p>When a contractor is appointed they can tell us what employees they are going to need, the number of plaster's and bricklayers and carpenters, and shutter hands that would be required. It is easy because you know how many are required or will be taken on board if you know the scope of the work, you estimate, once the contractor comes on site we go and have a meeting with them and say look we have made an estimate of your manpower that you are going to need in this category, can you add or subtract correct. In most case they agree with us and provide us with additional information, but you know at peak this is where we are going to need so many people, because they were telling us about the wall they are planning to build around err the University. Quite a large plot around the project so we have to double up our numbers.</p> <p>One of the strategies that I have established is if that is the case, what we need to do is you Technical College and Brigade, you need compiled a list of all those who have completed NCC with trade test B and C because some of them might have achieved competence four or five years back, might not be working or they may have switched to something else, but if you can get them you know we can put them through further training. You know our training is emphasising on practice, nothing else but practice. They have theory; we can sharpen them we call it re-tooling. We can re tool them to give them the emphasis on the practice. And immediately we put them on our list and pass that list onto the Contractor and we say, Hey you have these people. Now I involve them in the department of Labour in Palapye because the contractors will go to them and say hey I need so many people So it was kind of a team... Labour the Department of Labour is there, the training institution is there and the contractor is there. You see a three legged pot.</p> <p>I am looking at two years although the government if it wanted to could do it in a year.</p> <p>It's just a question of priorities</p>
Yes let me bring you back to some key issues regarding Policy. I know you said that you were going to be amalgamated with MTTC?	MTTC, hmm yes.
Hmm you don't know when that is going to be? Do you at all is it going to be next year or...?	Well perhaps two years' time but you know government could always fast track it within a year. It is just question of priorities.
I was talking with BOTA regarding the training levy and they were a bit concerned because much of the money has not been spent?	Yes that is true.
And in a sense that would be	

<p>artisan training? What would you say needs to be done then to make sure that companies start to do more of that training?</p> <p>Ok?</p> <p>Yes?</p> <p>Yes I saw it in the Newspapers?</p> <p>Yes.</p> <p>So it was about promoting more training?</p>	<p>You know what, we are meeting all the time with BOTA they are calling contractors all the time to sensitise them on coming on board to in the first instance develop the standards.</p> <p>Because if they are to claim....</p> <p>Just two weeks back we had a meeting with the Chinese, Chinese construction companies, Ministry of labour all, all these Chinese construction companies.</p> <p>Yes you know I made a presentation, BOTA made a presentation, of course key issues will be immigration labour but in the end it was the artisan development, these were the four issues that were discussed although there were other things discussed.</p> <p>An expectation that when people come to you they need to train to standards.</p> <p>Yes.</p>
<p>On the standards I did speak to your Director re the development of the standards and I know that you had some funding from the EU to develop these? Some two years ago I think?</p> <p>You don't know when they might finish those standards?</p> <p>Dr Z?</p> <p>Right.</p> <p>Yes.</p> <p>Yes there was but she is not working there now?</p> <p>Ok.</p>	<p>Oh they did. No not us them. (MTTC)</p> <p>With this lady but if we can develop the standards together I think we are on the right track. But if we can develop the standards together then we are on the right track.</p> <p>You know what Ian between me and you and I have said it to them. In front of them. These people got money, funding from the EU they got people from the EU who came, we had to interview, and there was a Dr? Z yes. And some others. We had a chat with them that this is good but most of all we must build capacity. Because MTTC does not have the capacity to develop the standards. They don't have the capacity to develop all the standards you are talking about. You need someone who can lead and give direction but there was nobody at MTTC who could give direction. There was a lady who was working there. Unfortunately because she was an expatriate she was pushed out, you know the locals made sure they pushed this lady out and she was the only one who knew what she was doing. She was the one doing the work and she left and handed over to somebody and then nothing has happened. You will not get anything from them.</p>
<p>Well has the funding stopped or something?</p>	<p>No it has not stopped. A lot of things have happened but you know what they seem now to have lost the material that the consultant completed.</p>
<p>Did they not involve you in the process?</p>	<p>No. We were supposed to have construction trades and we said we have to come on board. We have to give construction a bigger, because it's a chunk with a development which is already in place. We have to give it a priority, and they took it out. The Acting Director took it out because he thought I wanted to high jack, to take it over. I mentioned it to the PS why they have taken it out. The substantive post holder is in Singapore some further training or something. These other guys are just acting. But the Guy who was there... I went to the PS and said look I am looking at this and said this is a national issue it is no longer at institutional level, what MTTC is doing is not right. So it was taken out through the selfishness of organisation. They do not have it now because they do not have the capacity.</p>
<p>One of the things on the apprenticeship scheme we only have artisan or craft level. Do</p>	<p>It should be in place now. I'm saying because I was partly to blame for that yes DVET the idea of changing the VTC I spear headed that</p>

you see a scope for a technician level?	and I was saying we must train artisan as well as technician. Right now technical colleges are training BTEP but their numbers are terribly low. So there is need, a dire need to produce a technician.
<p>From other countries and the UK apprentices are becoming important again. Apprentices are seen as normally attached to a company that way they have first-hand industrial experience.</p> <p>Even if the Apprenticeship scheme was smaller but based in industry that would be a good thing? But they don't have a technician scheme. It does seem to me that here in Botswana it would be helpful for there to be progression as well? Even to degree level if that were appropriate? But then at least they have practical experience?</p>	<p>Yes we went through the artisan and the Technician yes it is important to have progression.</p> <p>In Botswana it went dead, Technician got passed over to the University and now it has been passed back. Because we were...</p> <p>Yes.</p> <p>Yes.</p> <p>In fact that is how we went through it. We went through the Artisan and then the technician going for a diploma, and then other branched into education, engineering, but you have a progression path.</p> <p>Yes, yes. And it is not everyone who will go to technician of course, but as you go up the demand is there in terms of the academic demands. But you know in Botswana everything went dead FET took over and then technicians were handed over to the University. Because it has come back again to DVET after 15 to 20 years of wastage. We would have discovered ourselves and would have transformed ourselves because what is also important is that you bench mark with other institutions. You know, Polytechnic because we are in the right ... as a BTC to MTC to then we are into introducing technician courses because you are bench marking with other polytechnics and then by that time it was gradually building onto the degree. But you don't throw away the artisan because gradual progression should be there. That is the path. Artisan, Technician and then Diploma then graduate.</p>
Then it gives more incentive for young people?	Yes exactly.
<p>Ok. The thorny issue is that MoE became the MoESD and when I spoke to the MLHA and their views seem to be different duplication. When you look at the documentation there does seem to be a proposal to move all education and training under one ministry? Talking to the different Ministries there does appear to be different views about that.</p> <p>Well I have spoken with the PS and Directors and senior staff.</p>	<p>Who did you talk to about that?</p> <p>Because I know their views and my views.</p>
I was interested in your view on this as to what would be happening as clearly it seems that there are two streams of thought here? Are we duplicating or not?	I'll tell you my view. Actually we were reprimanded by the PS, we had a task force with the Human Resource development and they set up a standing committee and we discussed with BOTA TEC etc. I served on that Committee. And when the directive was coming, when the cabinet directive came out it said that CITF and MTTC should be merged under the MLHA. Yes but my opinion is that I do not really care as this is administrative but as long as they do not change my mandate of the way that I have been operating. So for me to go to Education or Training and Industry it does not matter,

Ok.	because to me that is administrative. But the Ministry which is taking over should have an appreciation of what we are doing. The only danger that I see if you go to education is that they are going to strongly guiding us towards an academic requirements. Hey you cannot have an institution where you can take anybody you know. That one I would dispute, and going to any Ministry I don't have a problem as long as my mandate is not compromised. If I want to build a mobile two months or six months because I have to train the year before the project starts. If I get the money and I do my training I don't have a problem.
Would you see MTTC its artisan training as it is at the moment, would you consider that to being Tertiary or Secondary education and training in the broadest sense?	NCC being more education because of the requirements that are attached to it you know but gradually. If you look at the levels under BOTA which is at foundation there are some similarities with BTEP Emphasis should not be on the theory issue of NCC would be the highest artisan qualification in the country. So you can go through that and then when you train at artisan level assessment should not just be upon the theory make it 80% practical and 20% theory or 75% practical and 35% theory. And then 20% or 25% should be knowledge based. Because we have issues of team work, you have issues of communication that you have to integrate into the trade you are working on.
Do you think one of the confusion is that they do not understand the sector? When you talk about MTTC, CITF some find it difficult to understand?	I always say to them my role is because it is purely vocational now Technical and Vocational that now DTVET is doing. Because DTVET is taking long term vocational training where the emphasis is not only on working on practice but on the theory and knowledge and at artisan level you cannot make it 50;50. You cannot no. no.
Yes I understand that Mr X is also going. So there is a vacancy for you?	Actually I am told that the Director is going...He is going by December. Yes so is Mr Y. Yes I was considering if they advertise I might come back because I am very passionate about artisan training. Yes I would talk to the Minister, the Minister for Education and Skills, he know what we are doing because I have briefed the DP when I was telling them that you know technical colleges don't build more technical colleges . We have these technical colleges that are vastly underutilised. The problem is that they are grossly underutilised. You know why build these other technical colleges when you cannot use the existing ones capacity. And we can make use of these facilities and make more emphasis on what we are doing. Do what CITF is doing I am not saying that what we are doing is perfect but as much as BTEP to adjust it remodel it to produce competent artisans. And now we are talking about competences not BTEP students are producing documents like this but artisans. Academic qualifications are now producing a document like this (<i>Shows me a thick document</i>) An artisan does not need to produce documentation like this.
But BTEP was designed for technicians not artisans?	Well that would be correct then you can produce those reports Artisans do not produce documents like that.
Do you think that the apprenticeship needs revamping?	It's not just me who says that but it was the recommendation of the Revised National Policy on Vocational Education and Training. What MTTC Ian, is saying is that... err implementation in Botswana is dragging on and on. The government has got very good policies but what is lacking is implementation. In terms of you guys coming in and producing reports, I tell you that if you go five or six years back and look at what we have produced when we were there. Information is there. What is lacking is implementation and capacity building.

OK last question, because I have taken a lot of your valuable time. If you could change one thing? One thing in your sector?	<p>Let me give you an example like the vacancy at DTVET. If it's available and advertised then I would apply. If I was given the post first of all I am going to change the curriculum. I am going to look at the curriculum and say what is going on here we need to produce artisans. What is our main need? First of all I am going to establish a clear need for this organisation then I shall be able to drive them as a leader. If our mandate is to produce artisans then I will get them on board. Then take them and maybe those people who have been there for a long time and they don't buy in.</p> <p>The people who are there who do not want to change. I would off load them. Would recommend them off load them because I want to have a team that will drive my vision. You see once we have a mandate, the vision, err, mission, if it can be defined then your work is just to drive forward but if you have a problem with your mission then you cannot drive it.</p>
Do you think then the problem is the lack of driving leadership?	<p>Yes it is, no it is. My former Director was great in driving certain initiatives, but X lacked the technical know-how and understanding of Technical and Vocational Education. That was X's downfall. X was one person if X was focusing on something X would make sure X gets results. But X missed because Ministry replaced X to Technical Services and the Mr P was appointed. Mr P was my former student and even now I have told him and I will tell him that I was with you. But when it comes to BTEP I have told him please do not leave before you restructure BTEP to produce artisans? Because you are not producing artisans. If I am given the opportunity to go there then I will definitely change things</p>
Let me then just ask you one last thing? The artisan qualification was established under the MLHA so wasn't it rather difficult for the MoESD to revamp the apprenticeship programme? Hence they focused and developed the technician full time qualifications?	<p>That was an illusion it is the route that we took. I now have a change of mind now that I have seen.</p> <p>The industrial and training act has been repealed. I could take you to court as there is no law. Because you do not know your mandate Because you....</p>
Yes and has never been replaced?	<p>No that was just an illusion. When VTCs were first established they were to produce artisans. It is the route that we took we went the academic route. What we are doing what I am saying is that I now have a change of mind after looking at the competence based programmes practices and institutions I am now going to err you know that the apprenticeship act has long been repealed.</p>
It is true that once organisations are set up that they do not always follow what they were intended to.	<p>You know what if my son was on one of these courses I would take them to court and challenge them. We have an instrument which can cover which BOTA came into being through but you know they are not doing what they are supposed to do. They are not doing what they are supposed to do.</p> <p>Yes it's because you don't know your mandate. If you know your mandate then you devise you, you have a mandate that is very clear so you have to do a, b, c, d. Then you develop your mission, from your vision. And if it is clear then... But this is not happening and there tends to be duplication also by taking people who do not understand the subject that they are dealing with. That is a disservice.</p> <p>We can go on... Sometimes we come up with policies but there is a lack of capacity in implementation. Right now there is the MLHA. There is confusion now in terms of technical and vocational education and training. We have this Human Resource Council of</p>

Well on that... I am very grateful	<p>Mr W you may have met him. You know what, the Commonwealth, BOTA is also coming up with a consultancy on TVET. Because the left hand does not know what the right is doing. That is spear headed by BOTA, I went to this Commonwealth meeting and I said, no do not say technical just call it vocation training. But I say why is it coordinated by DPSM, when BOTA are there? Why all those because we still have this problem fragmentation. I said do you know what is happening? No he said, yes I know you when something is pissing you off I can tell by your voice'. 'You know what DPSM is doing', and I tell him, 'we do not have the capacity here in Botswana, so why are you fragmenting things more'? I am going to have to....</p> <p>Why don't we coordinate things properly? So there are a lot of issues but what I say why we not change. As I was saying if I had an opportunity, I will say to them give me a three year contract. I don't want any five year or longer contract. But you know I want to and make it to produce artisans and technician level courses. Build a team for DVET in three years. And we don't have to go anywhere, South Africa, you see our Neighbours in SADC they all wait for Botswana to develop policies and then they take them for themselves and benchmark them and then go and implement them. That's the problem we are very good at developing policies but we are very poor at implementing.</p>
Mr O was thanked for his comments and for his frank responses to my questions. I informed him that I would in due course send him a summary of the completed research.	
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General conversation before turning the recorder on. I explain about the research and the role that I played in DVET from 2000 to 2008.	
I think that the value of the BTEP qualification being modular enables people get certificates or qualifications all the way up so that they could leave at different stages and some clearly are going to do that.	<p>Yes.</p> <p>Yes.</p> <p>Yes that's right.</p> <p>Yes.</p>
Perhaps I can go through some of the questions now as I know you have to get off to another meeting and then perhaps? Ok, well I would be happy to come very early if you wanted? That would be fine by me. Yes I also like to start early. Yes let's see how we go.	<p>Yes well, I am here early in the morning and I was thinking that perhaps; well let's try and see how we get on and see how far we get.</p> <p>If you can be here around seven?</p> <p>Yes I am normally here about quarter to seven because I drop my son at school because I will be fresh and can do justice, but let's see what we can do.</p>
I was going to check up what additional documentation you may have published since 2008?	Ah, ok, now we have the TEC annual report and it has statistics there, which came out this year. It's referring to the tertiary traditional definition, but we have now changed the definition to include all those who have finished form 5. It doesn't matter if they are going to technical or what. So in future it will include data for all areas, but for now what you will find are statistics only registered under the TEC.
Ok that is fine.	
Yes I was looking for how many institutions are considered now under Tertiary but that will be in your annual report?	Yes, there are 33 institutions currently, it will also show you that

Oh that is really helpful as I wanted to know that I was up to date.	enrolments are 42,366, and it will also give you a snap shot of what they are doing, the programmes etc. Yah.
There was one thing that I was interested in. Under the tertiary sector from your projected figures for 2016 of which I think you have already exceeded this?	Well it has come down, because of course it was set in 2007/2008 and allowing students to go to private institutions for the first time such as Limkokwing so the numbers jumped to 17.3% of the 1824 but it has now come down to 15.1% and it...
Is that because you have more secondary school leavers?	No, err, Well it is partly that, but the government sponsorship is the gate keeper. We reckon for example that our projections show that by 2016 the school system will produce a total of 53,000. Last year 32,000 sat the BGCSE which is form 5.
<p>Oh, because what I am interested in is from Botswana's point of view how many do they think they would like to get into tertiary education and training in the longer term?</p> <p>No.</p> <p>Thank you I will do that.</p> <p>Ok.</p> <p>Really. I must look at the statistics.</p> <p>Yes.</p> <p>Yes that's right.</p> <p>But of course it is more of a technician qualification rather than being an artisan qualification.</p> <p>Exactly.</p>	<p>Well to answer that one, because our policy and the pressure that we are putting on government and everyone, is as many as possible. Many countries are pushing for 50% and I am sure they are approaching 50% now, and the idea is, if you are pretty serious about that, you also have to aim there.</p> <p>Our Minister says skills development and therefore she is talking more of vocational and informal skills training which is also good for a population of our size, but I don't know if you have seen the latest study by Maria Overeem? There is a study to which we actually attended the workshop on TVET yesterday. Can you check with Mrs U in the Ministry to give you the report, the SADC UNESCO Study, because it has a table that we developed with the Human Resource people and BOTA, but because they have put it there it is more official. Ours is still internal.</p> <p>It shows you how many in the last ten years, graduates passed through the, what do you call it level 'C' and B and NCC and BTEP. The total numbers although they are not large, but there are thousands and thousands. I would say altogether it's close to 50 to 60 thousand.</p> <p>And that is I would assume are the basic artisan population. I think NCC should be artisan not technician.</p> <p>So you must be happy at the skills profile of the population already where over the years we have produced over 200,000 people with very basic artisan skills. Maybe the majority will have stopped at level 'B' which is the second year of the Brigade then as you say with the coming of BTEP which is very unpopular unfortunately because people are saying that it is too theoretical.</p> <p>Yes. Exactly, they are saying there is not enough hands on. This means that they are looking more for an artisan, rather than a technician. But I'm not so sure that there is critical shortage given the level of the economy and its structure. Maybe what we are facing here is more a problem of quality.</p> <p>I think quality is a big problem because we have a lot of artisans from outside the country if you look at bricklayers, and whatever, they are from Zimbabwe, Zambia even from South Africa. So while the Minister is pushing for that, and I think that ultimately the ideal of-course which is happening in countries like some developed countries like Canada, to some extent Australia, is that University graduates after graduating and realising that they do not, err are missing hands on they go back to the Brigades, which is not a bad idea, except that they are displacing first timers from training but I'm saying if we are going to reform the country like this and we are</p>

<p>Yes.</p> <p>And you need a balance.</p> <p>Yes I see that from speaking with the Student Welfare.</p>	<p>transferring from the resource base to the knowledge base you are not going to do it from artisans and technicians . You need high level.</p> <p>So we, ... what we are saying this morning as I was appraising the business community, we are saying it is not either or, ideally everyone should do both and ideally they should start with the artisan and of course naturally there will be some who remain at that level . But like you say, this issue is an international challenge you sometimes get too many elite, you know theoretical thinkers rather than doers. Which is also a problem? Exactly.</p> <p>And you need a balance. So we say if we are now budgeting for a minimum of 20% participation at tertiary by 2016. Then we would like to push up to 25/30% by 2020. So those are the kind of figures, you will see some projections in our annual report. But we really think; we know the resources are really limited that is why we are now appraising the private sector, including the families to beginning to contribute to funding. Yes.</p>
<p>Till now Botswana has been very generous in the way it has been funding education, but it surely it can't sustain it in the long run?</p> <p>Yes I recognise that.</p>	<p>No it is un sustainable. No times have changed, even if we all want too.</p>
<p>One other thing here because I recognise the time. Progress of the four DTVET institutions. I notice in the TEC documents, it talks of four institutions, Francis Town, Gaborone, BCET and Oodi becoming Parastatal in a sense. Is there a projected time for this?</p>	<p>Yes.</p> <p>Yes.</p> <p>We are working on a report that we call rationalisation of non-autonomous universities or public institutions. And we have done a draft that we have shared with the Ministry. It is still under cover but we hope by the end of the financial year, we, the government should have pronounced on it and we will have reviewed the relevant legislation. So the beginning of 2011/12 financial year we shall begin implementing the decision because the idea is to have the proposal to cabinet as early as possible in the new year.</p>
<p>One of the big issues, partly because I did the statistics for DTVET last year, I think it was, or early this year if my memory serves me, is the big problem for the institutions in the staffing. They cannot attract qualified and experienced staff for the technician or artisan course and maybe being a Parastatal this may enable them to recruit more easily?</p> <p>Fantastic facilities.</p> <p>Exactly.</p>	<p>Yes we are proposing two things because some of them are almost white elephants but some of them are really excellent centres. Which could also be regional centres for training teachers yes so what we are proposing is that first we are facing problems of economy of scale, even if you had teachers for instance Colleges of Education and the Institute of Health Sciences we would be merging them into a new type of community college similar to Canada, USA... they will still have these different disciplines and we think for example a college of education together with a technical college as one college. A lot of the teachers in the programme would be able to teach some of the programmes in ICT, communication skills and so on, so you will actually save the resources and therefore the need for teachers will also be significantly reduced But what we are also proposing is an accelerated teacher training programme which should combine with teachers from a temporary input from outside the country. The Minister has already been to Germany, and to India, and she has promised us that they will assist. City and Guilds has also been invited to come and help in that score. Possible you have seen the Oodi College of Arts and Technology, so we have to train teachers</p>

<p>No you are exactly right.</p> <p>No I am fine.</p>	<p>in the technical and vocational areas. The study that I referred to, you can get from the UNESCO office. Err I think there were about 25, 000 teachers and 19,000 were Batswana and obviously that group is relatively poorly paid whereas the remainder from Zambia, Zimbabwe, Mozambique, England, you name it, 6000 or so that remain are better off in terms of training and background and qualifications.</p> <p>So a lot has to be done which is also the reason why quality is important. Those coming to these colleges for the reasons of perceptions and other things are the poor performers, because they didn't do well at grade 4 and 5. The second thing is that the teachers themselves, being the product of that system, are also poor quality and poorly trained teachers. So you add up the whole system and both the inputs and the outputs are poor.</p> <p>So that is the dilemma. Can I offer you a drink? (Telephone call interruption)</p>
<p>Ok one of the last questions. I have spoken with the MLHA and the Graduate Internship training scheme and I just came from CITF, MTTC. Now in Botswana you set up the Ministry of Education and Skills and many countries have this problem as to where to place training? Clearly there are still some with a view that ... Policy gets made but in reality things do not always follow in practice because I notice on the MTTC side they have built a very nice Hospitality and Tourism new unit, similar to what was already developed at GTC. One is under the MLHA and the other under the MoESD. Now Botswana is a small country and I know they have invested heavily in education, but I wonder is it the intention to put everything under one Ministry? Or will there always be some overlap?</p> <p>These things occur</p>	<p>We ... the intention is to de concentrate the process but clearly we also have a policy strategy and direction and that is to go the Parastatal direction. That is why for us we want CITF and MTTC to migrate to the Examinations Council so it becomes the technical wing, the examining wing, and we want to see CITF to come to this new organisation called the Human Resource Development and we wanted it to be a wing that will be, what we will call Rapid Skills development and reach out to the non-graduates.</p> <p>We wanted that to be the case and then the council itself will be an inter-ministerial governing board which in that case whether it is MLHA or the MoESD it will not really be important, but ultimately you make your report through one of the ministries say MoESD to the cabinet because you cannot report directly to cabinet, you have got to go through a Ministry but, the problem we are facing is that if you put them in the MLHA, labour in this country has no tradition of training and skills development. What they do is dispute settlements, life issues of labour in terms of the disputes and so on and employment related more than the skills development so that why BOTA has moved because it was paralyzed by the Ministry. Now education is also proving to be the same, there is no room for skills development. DTVET where you were before is an ordinary training department; there is not enough attention emphasis on practical work, so on and so forth. So a Parastatal will clearly reconcile the training and the market forces and the training at any level, what so ever. That to me is the ideal and this is what we have recommended. But unfortunately Mr Y feels that CITF + MTTC must remain with the MLHA. Then obviously the director on MLHA feels placated if they go (<i>I think here he means stay</i>), but they are not doing enough.</p>
<p>We had the same problem in the UK with arguments between the MoESD and the MLHA.</p> <p>Now The QAA; The awarding Body for BTEP, will that move to the Examinations Council? Yes I noticed because BOTA</p>	<p>Yes absolutely.</p> <p>Yes, Yes.</p> <p>Yes and would move to examinations, yes and BOTA as well because ... it will move to the examinations council.</p> <p>Yes. Yes of course.</p>

was set up first then it did perhaps go beyond its Policy mandate?	
Now finally may I just ask what you would think is the philosophy of Botswana in Education and Training? Would it be a form of Social liberalism, because you have generously funded education and training but you are also introducing competition? Money follows a student? You are setting up a market? Would you feel that was reasonable term? I think you said yourself at the TEC Fair/ exhibition last year that now tertiary education was moving to become a competitive market?	<p>Hmm,</p> <p>Yes money will follow students. And we will also intervene with financial tools funding. Look, <i>X Tertiary Institution</i> (One of the first private Universities) whatever people may think about it, it did give them (The University of Botswana) a run for their money.</p> <p>Yes there will be competition it is a reality now, yes we are adopting social liberalism, it would be a good term and a good term for a PhD student. If we take that and we decided if it is for the public good. But definitely we will not go in terms of who pays. We are in the middle, we are somewhere in the middle and would like to protect significant areas. We do not want extremes we will not pull out of certain areas if the private sector cannot deliver.</p> <p>In my argument I have said that for many years for a very long time we ran this country on income from Botswana who were working in South Africa in the mines. So why can we not produce export well educated and training personnel, because the same principal applies to labour. South Africa is comparatively behind us due to apartheid and applies to labour as well therefore why can we not enter their market? In a small society, you can afford to move fast. So move rapidly and beat your competitors. Look who is here the Zambians, Nigerians, Zimbabweans, Kenyans, Tanzanians it is because their leaders concentrated heavily on education.</p>
<p>The UK is struggling with the same issue on costs</p> <p>I do not know if you have read Professor Wolf's 2002, Does Education matter? If you educated to narrowly then people may not be sufficiently flexible to meet the challenges of a changing requirement?</p> <p>Thank you so much for making the time to answer my questions.</p> <p>Thank you so much.</p>	<p>Yes.</p> <p>We are not getting value for money, lots of inefficiencies in the system. We have one of the percentages of GDP one of the highest in the world expenditure on education. We have calculated in one of our tables. One of the highest in the world, Yes It is unacceptable.</p> <p>Look I have to run now. I will be interested in what you establish from your research.</p>
4/11/2010	Interview 9
I briefly introduced the Interviewee to the proposed research before asking him the questions.	
What level of BTEP are you currently running? Ok.	We are currently running Advanced Certificate in Electrical and Mechanical Engineering and we are also running ICT certificate.
You don't have any for widening that at all?	We do have plans but are plans are a bit limited because of the west wing presently which offering University programmes. As soon as we probably just we phase out, what we did was to phase out a few certificate course on that side. So I believe that when we do that with the other course we will be able to expand because BCET actually there are only two colleges that are running Advanced level and that is ourselves and Francistown. Oh and GTC the third one.
Ok so when do you think you will be running or completing the Diploma level?	Well I think we err, the first cohort will be around, around April 2011, because we are targeting, because we have three groups now on Advanced, then we have a further two groups that we are targeting, we are talking about five groups and other groups from Francis Town, so we don't know how many student are going to go through but around April we are going to have about three groups that are

	doing Diploma level.
Ah that will be really good. So how many students do you anticipate having in your institution in total? Yes. But you have just had some new buildings? Have they been handed over yet? Will not that increase your capacity?	Well, the two, well you mean BCET the whole, all courses. Well we are target is less than a thousand. Yes. No, No, it will not increase the capacity, because the building that have been augments or, it's the dining hall, the, what do you call it the multipurpose hall, but are target would be at least 1,100.
But what about when the University move out of your current premises?	That's right. When the University moves out we will have space but the only problem that I for see is err the lecturing staff, because attracting engineers for these courses, is a bit of a challenge because you are competing with companies, big where people are getting scarce skills, it is a bit of a challenge really.
Has any integration taken place between the transferred UB students and staff towards doing the degree?	Not yet because we have not yet, No not yet Mr Morris.
And again between the transferred students and yourself you said that some are being discontinued now	Yes some are being discontinued. Err we see there and there some student who would cross the floor as it were from UB course to BTEP and from BTEP to the University. You see it's like students are like testing the waters to see which the best is. Which I think is a very good move when people have the liberty to move from one course to another. It is wasting their time but at the end of the day but to get the best programme you know what I mean.
So where are you recruiting your students from?	Err, for the BTEP programme, we are getting students from other certificate offering institutions. But for the University developed programmes we targeting students from even the technical colleges. Some are fresh from school Cambridge leavers.
Ok so we don't know what qualification they would have?	No. We normally for those who have just finished the BGCSE one should have passed with 36 points. Yes because they have to be government sponsored. So if they are less than 30.
So what have your students who have come up from BTEP certificate got? I presume we do not know?	No.
What are the greatest challenges for your College at this time?	Well the greatest challenge now is lan is just that you see these colleges were merged from ATTC and CDPU and the way that the merge was done I believe it poses greater challenges for us because , former ATTC used to have certificate and diploma lecturers and when the school was upgraded, well degree holders were the only ones upgraded. The challenge is like you are running two schools in one. You know are running Diploma and then certificate courses NCC. SO the moral of these people, there is no team spirit. Some people feel they were neglected, some feel the government didn't give them a chance to train then so that they could get these posts and another challenge is you see, when you are given the food to cook and the pot is a bit difficult , because right now we have challenge of lack of lecturers . Because when you talk about the lecturers who should be teaching the students now there are some other developments, like BOTA is involved. To put up an advert BOTA says that you have to put up to say that the person has to be registered with BOTA. Yes so it is a real challenge. Really.
	Another challenge is that we used to operate with TFTS. You know

	<p>where by if a lecturer maybe dies; you recruit a TFT as a principle. But nowadays for you to recruit a TFT you have to write to DTVET and Ian students are in class you know what I mean, and it is a challenge. Another challenge is that you know is the scarce skills that was introduced to so as attract people into technical education , but the Principal, the Deputy Principle are withdrawn from them and they are supervising people HOD's that are probably getting about 40% of their salaries and that person is supervising . So you are supervising someone who is getting twice what you get. So it's a challenge because you have to really console yourself , you don't know how to so that is where it is a bit of a challenge having to supervise people who you know are earning much more than you are. Even the structure again, ya like the principle you supervise the Deputy Principles, and the deputy principles supervise the HOD's so you are supervising people who are within their level. So it's a bit of a challenge to be honest.</p>
Well yes ok. But it leads nicely onto the next question. In terms of the College becoming a Parastatal, which I understand is being planned. What training or resources do you think you will need?	Yes we are heading for that.
Do you think that you will be able to attract more staff if you are a Parastatal?	Training, additional resources err well I believe in terms of equipment the college is well equipped the only challenge is getting the right people to teach whatever course we are offering.
So that is one of the advantages of being a Parastatal then it is going to bring improvements in staff recruitment and institutional maintenance?	Yes we will, we will, because at least you wouldn't have to wait for whatever somebody to be appointed, it would be done by ourselves. It's up to you and if it comes to maintenance because we would be able to take care of maintenance ourselves or source out but now the challenge is that we have to wait for DBES and DBES will take well you know what I mean?
Do you think that then you will be able to better compete with the private sector?	Yes, yes, it will be better.
But of course being a Parastatal you will have to manage your HR and finances and resources so you would probably have to recruit new staff possible.	Yes that is very right we will be able to compete Yes that is very right and then again right now we have people who are seconded to us, like you take finance people and supplies officers. Those are people who are seconded to you. You don't have a say or full control over them. You know what I mean in terms of disciplinary, actions you know you have recommended to somebody but in the end the college suffers because you have to wait for these people to. Even now we are having problems with supplies people who have been transferred here, because they do all sorts of things and there is nothing that we can do we just have to recommend to headquarters and it takes time Ian.
Have you seen any timetable or anything for when this might happen, the move to Parastatal? Of course you have already some costs from the 2007 Financial review report but it may not have done institutional ones ok so look just coming to my last question.	We have been sort of involved sort of beginning. TEC is also involved in some workshops. Like last time they came to introduce and then we have to go for this unit cost it will be a three day workshop , by they are going to get, to familiarise us probably with how to calculate unit costs and everything . So what we are currently doing is to compile peoples salaries, peoples what do you call it, benefits all those things. So it is starting.
If you could change one thing in your college to make	Ah, if I could change one thing? Our core business is teaching and if you are not given the powers to do what I said earlier on, we used

improvements what would it be?	to appoint TFTs at any time you know what I mean that is one thing that I would want HQ to change to give us the powers to recruit and appoint you know the TFTS. Because Ian you know that is the most important thing.
Well thank you was there anything you would like to ask me?	Well I think the questions were fair and they get the right information which I think you want which we talk about time and again and you know the bureaucracy delays a lot of things. Like now we have the kitchen the catering so it is almost three months and we haven't paid them and they are saying Supplies are killing us but what they say is that we are waiting for the PS to authorise the monies. You see how it is and, and.....
Well thank you very much and I will be sending something back to you this but it may be a couple of weeks yet as it takes time to transcribe the audio tapes and you can then add anything further that you want. Thank you very much for answering the questions, it has been most helpful. I will let you have a summary of the research findings in due course.	
3/11/2010	Interview 10
What level of BTEP are you currently running in the number of programmes?	We are running certificate level as well as Advanced Certificate level programmes. We anticipate starting the Diploma level programmes very, very soon. .
What sort of vocational areas are you running?	We have programmes in, ICT, Business, Hospitality, Travel and Tourism, Clothing Design and Textiles; we have Hairdressing and Beauty Therapy, Building Construction, Electrical and Mechanical Engineering. These are the vocational areas which are complemented by the other area of Key skills that cut across all the programmes. These are just intended to give our students some life skills.
When do you think you will be delivering or completing the Diploma level	Most probably by April next year.
How many students do you anticipate having at your institution?	We are hoping to run above 700 students, by April next year.
But what is your capacity then?	The College is designed to enrol up to 1000 students, but that is an ideal enrolment situation. We do have some challenges which are not enabling us to run to that full capacity.
What about with the new buildings you have?	With the new buildings we believe that we will increase our enrolment just near to the full capacity. Looking at the resources and other constraints it may not be possible for us to near to 1000 immediately. It may not be possible to reach that immediately.
Have there been any discussions and yourselves and the University on the progression of students on the Diploma to go through to the degree level?	There hasn't been an official meeting regarding articulation of our programmes to the University programmes. However the University people are more than involved in our validation processes and external verification processes.
So if you they were expecting them to join a degree programme what entry level would you think would be appropriate? Would they get credit for the first two years or what?	Yes we believe they should be considered for second or third year level.
Ok. So where are you recruiting your students from?	Hmm, I would say all over the country, we have students as far as Maun, Kasane far west.
Are you still following the Admissions policy and procedure that you did some	We are trying to follow it, at times there are challenges because as you may be aware our admissions policy considers the disadvantaged, these people, but we take them on the bases of

years ago?	whether they would be able to go through the programmes without any due stresses and so forth. We are still following that we haven't turned down any people because of a
Do you lose any students nowadays? A few years ago you lost students because of the Grant/loan scheme not being applicable to technical college students? But now your students are eligible for the Grant/loan so presumably students will remain with you now?	Yes but that has not changed. You will be aware that the private institutions are still mushrooming. There are also offering some of programmes which are competitive with our programmes and the movement of the students, cannot just be stopped. It continues when some feel they could apply for a degree programme at NIT or at Limkokwing or Boston University where as someone here could only do to say Advanced Certificate or Diploma level. So those are the issues at the moment.
So if that is the case would it quite important for you to show that you have a through and through programme to a degree level?	Yes, I think what is happening at the moment is that we did not have a clear progression route, because our students exited at certificate, advanced certificate some will exist now at diploma. If it was clear from the onset that they are entering these programmes at diploma level it would have attracted a lot more students than it has already done.
So maybe in the future you will have more opportunity to attract more students once you are recognised as a diploma offering institution.	Yes, because we will be equally competitive with other, other learning institutions that are offering programmes at these levels.
What about staffing? I understand that some college are having problems with recruiting teaching staff and the impact the number of course and students they can recruit?	We have, staff continues to be a serious challenge. You will recall that when we started there were a lot of part timers, (TFTs) which complemented the few staff at the time. The reduction of the part timers did not come up with a full complement for the existing vacancies. We still have a lot of vacancies in some departments they are not filled. Yes the colleges are still having serious shortages on some areas.
So what is being done to get those vacancies filled?	I think our HR at head office is of course, supported by the corporate services should embark on serious recruitment drive so that those departments who have serious shortages can be filled. Because it is affecting the quality.
Do you lose many staff to the private sector because of salaries or what?	We are losing a lot of people because of yes the salary hmm.
Is it higher status in some of those other institutions?	Yes err I would say we do not have a good pension strategy so our people who are well trained are lost into the industry.
Now I understand from the tertiary Policy that your college is scheduled to become a Parastatal?	Err what the TEC you are aware that it has been given the mandate to coordinate Tertiary Education. So in their policy they have indicated that they will be funding Tertiary institutions particularly the public institutions that have been funded under the MoE. So the funding will be with them and I think they will give a degree of autonomy to institutions to be able to err run their programmes.
Looking at it I see that they highlight GTC, BCET, Francistown, and Oodi as being potential Parastatal or institutions in the longer term.	Yes I think for the reason that, these colleges were designed to offer up to diploma level and therefore diploma programmes obviously fall under the Tertiary education sector and therefore I think it's in order that they have started with these four colleges.
Do you think that will be an advantage for you if you become a Parastatal?	Err, becoming a Parastatal has its challenges but we believe that it will improve a lot of err, the colleges will be able to improve in a lot of areas, because currently the government has a lot of controls and bureaucracy which delays lot um, the procedures that have to be followed have to be standard across all the ministries and admins and I think if you have the autonomy they could be able to

	<p>determine when it comes to recruitment , they will be able to determine the nature, the calibre of the people without having to look at other ministries ah procedures, and also even the buying process to keep cash to buy small things you have a problem err you have to wait for a week or so for the funds to be prepared through the cashier , in order for you to pay for an examination to go and really it reduces the efficiency.</p>
<p>If that the case there is some advantage but what additional training/resources do you think you are going to need to become a Parastatal?</p>	<p>Obviously financial, err training on financial matters, um because we will be able to, we will be funded on the bases of the students that we enrol on the bases of the course that we are running, so different courses will cost differently and people on the ground should be very knowledgeable on costing so that they either don't over cost or under cost for appropriate funding and more importantly even the operating cost people should be conscious of the operating costs of an entity. Unlike the situation now if you ask me how much we have paid for electricity now I may not be able to, I would have to go to the bursars office to see what they paid but I think if it was for the college I would know how much we are paying and what are we paying, what are the courses and all those things then you are well informed of what is happening.</p>
<p>Ok Just one last question then. If you could change one thing in this institution to make improvements what would it be? What is the biggest thing that could help your institution become more efficient more effective?</p>	<p>I think it is more to do with the calibre of the people you have on the ground. If you have the people with the relevant competences, if not what is it that you can do to improve them, but basically I think we are disadvantaged by the shortage, by the shortage, in some areas, like textiles we cannot offer some units, because we don't have people with textile technology and that affects the enrolment, because instead of taking three groups you have to take one because people are struggling in some areas. So I think if we could have relevant staff with appropriate competences we could be very, very efficient. Even under the current government controls.</p>
<p>So these people that you say you are short of those skills, are those people available here? In the country or could you get hold of them say if you were a Parastatal?</p>	<p>Err, some of them are not available although we could hold them if we were a Parastatal because we could offer them compensation salaries but some are not available in the country. In which case you can recruit outside. Yes but you know the current government procedures for recruiting outside takes time.</p>
<p>I guess that even if you were a Parastatal you would have to justify why you could not find someone local?</p>	<p>Yes. Is clear we don't have people qualified in the hairdressing and beauty therapy sector in the country so it will take time unless we train people ourselves to gain such qualifications we do not have such people and therefore it is something that maybe HR should go out there wherever they can find them, those people and bring them in while we take our people for training and then we will be able to offer these programmes because really the community needs these programmes.</p>
<p>That was going to be the last question but there is just one thing that comes to my mind and is that the minister has approved funding of BTEP students under the grant/loan scheme, and from foundation which is below BGCSE which seems to me surprising. Is there a reason for this? Because money is limited would it not have been a better idea to fund from the certificate level only</p>	<p>Yes my personal view is that yes foundation is an elementary programme and rather than giving these people the sponsorship they could either be allowed to train and pay and it would motivate them to succeed and then those that succeed could be given the funding. It could be a motivating factor on the other hand. Err I come in I pay and I work hard so that I get government sponsorship.</p>

upwards?	Once I get sponsorship I can continue my studies effectively.
Have you seen the 2009 review of the Grant/loan scheme and the proposals they want to bring in? Well in some ways they are looking at some cost sharing measures with the family having to make some contribution. So everyone will have to pay something by the looks in the future.	Err I haven't gone over that report yet.
Well thank you very much indeed that was most helpful, I will send you a summary of the research findings in due course, thank you again.	
4/11/2010	Interview 11
Ok. May I ask how many advanced and diploma level BTEP qualifications do you have now? Well perhaps you can give me a copy please?	So far, I think I would prefer to refer to the documentation. But we have got a lot of achievement regards, the advanced certificate there are quite a number of them now.
May be if I can get the exact number that would be really helpful please?	And you said diploma? So the diploma programmes we have also got, there are two in the hospitality area, we have two ICT, we have EME 1 programme, we have got business 1 programme so far at diploma level. About 6.
Have we launched any of those at diploma level or is it just at Advanced level at the moment?	We have ICT administration, I should say network administration, has been launched and we are planning to launch in January another ICT diploma. Hopefully it will be run at GTC.
I understand that there have been a lot of challenges with the slow development because we started back in 2000. What are the major challenges for that slow development?	Err in my view its inadequate human resources in the case of programme developers as well as teaching staff. This has contributed a lot to the slow development.
Is that because you either didn't have people that were qualified or it was difficult to get hold of qualified technical staff?	It was difficult to get hold of technical staff and retain them.
At one stage you used to have quite a number of expatriate staff although I believe that these have been reduced now?	Yes it has been reduced and at that time they concentrated at foundation and certificate level. Those were developed in large numbers.
You will be aware of the new tertiary education policy that's come out. I wonder what changes you anticipate which will impact DTVET or in your department in the future?	There is a TEC policy and an O&M review which has recommended that the diploma level programme should be under tertiary education and that will provide a lot of improvement and some of the areas are wide and we need different people to compliment the teaching and if the colleges are autonomous they will be developing curricular at their respective institutions. Then they will be having all the necessary resources.
So what happens with those colleges that are not made Parastatal or is it planned to put them together in some sort of configuration or consortium?	The O&M has separated the vocational education and the technical education. So it will be the technical education that is tertiary but vocational education is still well under basic education, so it will be below tertiary and those ones we are still going to need Programme development and delivery to develop programmes for those.
So what are the programmes that they are defining as pre tertiary?	This is NCC programme and also the BTEP foundation level. Yes NCC because it is certificate level.
What steps because I	We have been trying to ensure that there are adequate teaching

understand in your department even from your previous work as Principal of ATTC, student capacity in the colleges is quite low at the moment for a variety of reasons. But what steps are being taken to increase capacity in Technical Colleges at this time?	staff that, those that should be teaching diploma for instance or even advanced certificate they should be degree holders according to the conditions of service and they are rare to find. So some of the diploma programmes were delayed to be launched because there were no qualified teachers, so the steps that are being taken to address this shortage are not very clear. Err at one time we made a list of all the requirements with the hope that the office of the PS, will find expatriates and unfortunately they went to India, but they couldn't get them, they went to Germany, they couldn't get them. The German ones we have not received official feedback but because nothing is happening we assume that they did not get any.
They didn't try closer to home? Originally you had Kenyans, you did employ Zimbabweans, who I understand were very capable and qualified?	They were qualified. Some of them we could not renew their contracts because we wanted to localise. I think it was localisation but at the same time making a gap. We were localising by promoting a local to a higher position and there would be no one to close that gap, yes.
Ok. So what programmes do you anticipate running in the Brigades that have been taken over?	At the moment they will continue offering the trade tests and NCC. It is only a few that are resourced to offer the NCC. Most of them have resources to offer trade test C and B.
Are there any plans to offer the BTEP foundation?	Well at the moment we are still rationalising, so after rationalising we can say these are the Brigades that will offer BTEP foundation but in some areas where we have control of this we would prefer that they offer the BTEP foundation and certificate level.
Ok, thank you, so obviously now just going back to your advance diploma, now it's getting close to running the diploma level, have you been taking steps with the Universities regarding progression onto the degree programme?	Not yet we are still to arrange that with the University of Botswana. We have met once with the new university of Science and Technology and they are interested in our programmes. So they were saying we may enter into a memorandum of understanding. Where there is a gap we could agree on certain units that students would do in order to cope with the complexity of the degree programme. Unfortunately they are only interested in the science programmes so it will mostly be our engineering and ICT that they are interested in.
Ok, finally if you could change one thing in your department to make improvements what would it be?	The structure of the Programme Development and Delivery. At the moment I am not sure whether I should say it is rather a flat structure. At the moment there are nearly 30 programme developers and according to the requirements a supervisor should read their work even the drafts of their questionnaires should be checked before they start to begin the work and this is not realistic. This could be changed. In fact I have already come up with a proposal and submitted to the director that we should divide into four departments so that we can have four PTO1's that are supervising these officers and their work.
On the O&M study it was talking about moving curriculum development all under one branch is that still likely to take place? Or do they now see that TVET is a very different sector?	They have now realised that. It will be very complicated to mix it with basic education. So now they are beginning to draw a line between the two and it has been agreed that for now it is not going to take place so it should not be regarded as part of basic education.
Just one thing that links with that, regarding the QAA it was set up to be slightly separate within the Ministry. Has there been any discussion on where QAA would sit within the new O	At the moment it has not yet been finalised at one stage it was said that it would go to the national qualifications framework, at one point to TEC but it is not yet finalised. But I would prefer that QAAET remains part of DTVET for internalising the QA. We have got BOTA and TEC, these are external QA bodies, but internally we need

andM organisation?	those units to ensure that we internalise QA.
Has there been any encouragement for private training providers to offer the BTEP qualification?	You see we have not completed the cycle yet, even it is a challenge to market the programmes. People are still not confident with that programme, so we still have to market, but when you meet the students those that are progressing like in the case of ICT when they go for attachments in the area where they are attached employers are happy. Now people will start to taste the students. After tasting them, at the moment it is just opinions people are just saying it perhaps one person has said something and it is viewed as general opinion but it is only one person. So far some have only heard about the programme.
In 2006? There was a tracer study but of course that only covered up to Certificate level. Do you have any plans for conducting further tracer studies?	No it hasn't as yet. A good number have now completed the Advanced level but they are proceeding to the diploma level. Most are fighting to go into diploma level; they even go to the minister and say we want to go to the diploma level. We have promised that if you are doing well then you can go up to diploma level.
And of course now you have the grant/loan scheme which covers all BTEP students.	Yes exactly. So we are hoping to have ICT in small numbers because we do not have enough staff and multimedia and we are waiting for the facilities at GTC to be completed and business, two colleges so far have been approved to start business at diploma level and the EME is a challenge. Those that completed the advanced certificate out of 24 of them only five completed. The rest went to attachment and they got employed. The five that have completed I understand that three of them have been employed by DBASE. Yes it would be good if we can see students completing the diploma level so that we can evaluate the level of the programme.
Finally, at the Tertiary fair either the minister or the chief executive announced that it had now become a competitive market with both private and state competing for students. Have you noticed any impact for that?	Well not yet because there was competition yes at the time that student were going into public institutions because they were sponsored but now the sponsorship has been expanded to cover BTEP even at foundation level so the competition is not so evident now.
Just on that and that BTEP foundation is also sponsored. As foundation level is seen as part of secondary, do you think that that funding under the grant loan scheme is likely to continue in the long term?	I think it is going to be a short term thing because it needs to be thought of and discussed because right now there has not been a very clear policy on this. Now after it has been extended to the foundation level, then they are saying that you cannot be sponsored again. They are separating this foundation from the rest of BTEP diploma. So if you have enjoyed the sponsorship at foundation level don't expect to enjoy it at the higher levels so obviously it's not going to attract the candidates if this can be properly explained to them, because they pay only P750 at foundation level so they would prefer to pay P 750 and then get sponsorship for the three years. Yes but because of the recession nowadays those early promises are being revisited.
Thank you ever so much for giving me this time and answering my questions. I will feed back to you in due course as I begin the analysis of the data collected over this visit to Botswana. Thank you again.	
5/11/2010	Interview 12
I provided the Interviewee with an outline of my research before commencing the interview.	
What changes do you anticipate taking place as a result of the new Tertiary Education policy?	The changes. Err, from TEC we are going to have our diploma offering institutions falling under TEC and having even there financial structure changing like they will become autonomous.
Has anything happened on that route yet?	Err we have task groups, and we are working on those. They have divided the activities up into, and well I mean the new for

	autonomous bodies the finance part.
In the TEC document they talk about four institutions, GTC Francistown, BCET and Oodi. But what would happen with the other institutions?	Yes Err; I don't think they are taking the lower levels. I think those will be reporting to BOTA. Here they are just talking about Diploma plus. Err that's their focus.
But BOTA and TEC are being merged I understand? Are they going to be two separate arms within the same organisation do you think?	Yes it does look like that they are scheduled to merge by 2012. But perhaps the focus on levels will remain separate.
There was some talk of rationalisation of institutions because so many of them were small and I think that TEC was suggesting that it was better if they were dealing with larger institutions? But nothing has been thought about linking the remaining Technical Colleges has there?	No, I haven't heard anything.
So what do you anticipate is going to happen with finance regarding DTVET, is it not going to have anything to do with these four colleges? Will you just be left with looking after the remainder and the Brigades that are being taken over?	Well I think we will still have a say or an input because it's not like they are not going to receive a grant from the government. They are going to receive a certain percentage but it will depend more on their output, how well they are doing. Their focus will be different. Right now we are giving them money whether students pass or not but now it will be well structured. So they cannot just come and negotiate and then give them an increment it's going to be different.
I suppose that they will be setting their own salary structures and other things like that but they will need to be effective and efficient?	Exactly. But if they set their salaries high then they are going to have to bring in more money. By bringing in more students therefore more money rather than just receiving a percentage from government.
Has anything been discussed about this yet if the funding will be split into a number of parts, say a base budget say + number of students ?	Well they do have models but and they have presented some different models at the workshops. There are so many of them but no decision has been made yet. They have so many of them do you have a memory stick then I can give you them.
So your role will change as you will have less institutions to manage. Will this role then be more monitoring to make sure that the money is spent correctly?	Yes and the evaluation of their training processes whether they are bringing quality or not, because now they are not just going to get money whether they have performed or not, it will be based on performance. Maybe it will save the government some money? If they make their own monies?
What training do you think technical college will need then for these major changes if they are going to become Parastatal?	Ah no they need to be prepared, like TEC will be running, I think they have started with 'change management'. I did attend with Mr X at one point a two day workshop that they organised. They say they need to train people to be aware of what is coming. Even for the Colleges for them to be autonomous I think the requirements will be strict. So most of the staff we presently do not have so they will need to be trained up to fit even the new structures. New post in personnel, finance and probably site maintenance. Very strict yes.
Have any time lines been set for the implementation?	For when to start this new structure? No the only time line that I saw was, is the merger which is set for 2012. But for the Parastatal, no I do not have any time. Yes the merger of BOTA and TEC.
If you could change one thing in your department what would it	In DTVET or? What I want is huge I don't think, it will take years if the government

be to make things more efficient or effective? In DTVET or your department?	was going to give the motivation of staff. And to look at what really causes de motivation. Is it the rewards? Or the incentives? Or the recognition? I really want to go into research to find what is, because if you look at DTVET glancing through only 5 % of the officers are working. 95% of officers are doing nothing. So we really need to check what is to revitalise the department. Exactly that what I need. You can see how unobtainable it is.
I guess what you are hinting at are many things like leadership, money, status, quite a lot of things?	Yes, yes exactly.
So why do you think it is that people do not bother too much if you think that there are a high proportion of people not motivated and not doing anything? Why do you think that is?	I, the thing is, the historical background, and the fact that people are not made aware of where we are today. The public administration has changed, we are now into management, we are now operating like corporate business, we are moving more to a business administration. You know government is all about processes, bureaucracy, we've moved from there and there are a lot of people are not aware.
So you are saying things have changed but people do not realise that it has changed?	So this new thinking is all about cost efficiency and they don't know what you are talking about. Exactly. I don't think that the people have realised because even the PMS, they were just informed they were not given the background. The global background that the world has changed. They don't have that picture. They just see that they have to fill in these forms and they will be appraised. They don't where it is coming from. There is no link. They cannot understand how it fits in with management thinking.
So whose fault do you think that this is?	Err I think it is the guys on top. I don't know whether it's the Minister or the policy makers up there.
There have been quite a lot of staff changes with new people coming in do you think that that is making any impact?	Those people have just been roped in. They just come and sit they are probably demotivated and do nothing. There is no positive impact from the new officers. Yes we are just running along with the reforms and now and if we are implementing the management appraisal reward system then we are not even able to implement the reward system which we are talking about.
Do you have a lot of reforms? Is it just that people cannot keep up with what is taking place or they cannot understand what is taking place?	I think commitment from the leadership is lacking. If they say we are introducing a performance rewards system, then let people who have performed well be rewarded. Now nothing has ever been done with the PBRs. When you look at the appraisal forms you have to indicate if this person got 70% , that is attached to whether that person is an exceptional performer or not, and if he is exceptional performer you are supposed to give him something but it has never happened.
Well that is all that I need to ask you. Thanks you so much for providing me with such frank answers. I will be providing you will feedback from the research in due course. Thank you again.	
Date 5/11/2010	Interview 13
Introduction regarding the research. How tertiary policies impact sub degree qualifications. Everywhere in the world they are having problems. Although governments say there is equality of esteem between academic and vocational qualifications. Most parents and students prefer to go to go the degree route. So I am looking at	Yes, that is the case.

what governments are doing to make those changes.	
What changes are impacting QAA under the new Tertiary Policy if any?	The impact on QAA? I don't know. Nothing that I am aware of.
Where do you think that QAA should sit within the new organisation structures being proposed?	The HRD study? Where we have BOTA and TEC? I feel that QAA should go to well the verification aspect could go to the Examinations Council, then the evaluation of programmes, would go to the exams council ...
So no discussions have taken place that you are aware of yet? So no one has brought you into discussions?	No we are not aware of any. No.
Do any private organisations run the BTEP qualification?	No not yet.
What qualifications are available and what levels? What programmes have been validated?	We can give you a list
Do you have the latest statistics on BTEP achievements?	I think that can be organised.
Have you had any discussion with the University about progression from BTEP to the degree level?	Not to our understanding. I think if there are any discussion the, that would be by DVET. I'm not sure.
But are not you part of that?	We are but, really I am not sure that anything has been done, because in the past the programme development had to talk to negotiate with industry and the university, but I think really it should have been the management.
I do recall that about two years ago that we had meeting with the UB admissions people to enable them to understand the BTEP structure. I also have heard that they have had conversations with BCET about progression for engineering and science students.	It could be better, you know at the moment it is ok but in the future there could be improvements. We talked about err the progression routes. We are just a little bit of BOTA, so it kind of over shadows what BTEP is all about.
What are your impressions regarding BTEP are you happy the way things are going? Or would you change anything if you could?	<i>No response.</i>
On the 2007 tracer study report it suggested that there should be more marketing of BTEP. Has anything happened on this?	No really, not much has been done and a lot of people did not know about it. We went to Francistown and had our conference there. A lot of the people from the University did not know about it. They didn't understand what it was all about. We still have a long way to go and a lot to do.
So whose job do you think it is to market BTEP?	There is a marketing officer at DVET and one thing is his responsibility, but he could get everyone on board if he leads the people to help, but it is impossible for us to go out there and sell BTEP it is not our mandate, we have our conferences to you know but those who attend are normally those who help us achieve, do the validation and verification and stuff like that but we cannot go out there on our own and say here is BTEP we need support. If that ... gets everybody on board it would work but I don't know what is happening?

<p>I think the other year at the TEC Career fair the director said we are now in a competitive market with private universities and others schools etc. and they are all doing different qualifications and it is a market and therefore marketing is a critical issue otherwise you can get swallowed up by all the others, but with the Director and the Deputy retiring at Christmas so what do you think is likely to happen?</p>	<p>It's scary, now to me it's scary. You know I wish that one of them could remain but when two senior management people leave and it is not just the two as one from HR is also leaving then that is going to create a gap . I wish if they could get someone who has been in the system to head the department and someone who is knowledgeable on the BTEP issue then I can foresee some progress, but if someone comes from other areas then, they are going to spend a year or two learning the language and the like that could bring down the whole thing.</p>
<p>One of the things I have noticed is often the confusion between artisan NCC programme and the BTEP. Something that BTEP is trying to replace it there do seem to be a lot of misconceptions. There is talk of is BTEP any value at all? Then I hear that there are conversations with City and Guilds.</p>	<p><i>No response.</i></p>
<p>If you could change one thing in your department what would it be?</p>	<p>I wouldn't change the processes because they are fine but I would give more staff to support our colleges, because we need to be seen in colleges we need to help and make sure that the processes are maintained, but at the moment with two, three people running one process for seven colleges it is impossible, quality is bound to be affected. The processes themselves are spot on it's probably the support that is lacking so that's the first this we would think about.</p>
<p>Of course one of the things is that Examinations is like a Parastatal I think?</p>	<p>Yes it is. The other problem that I think we have is sitting under DVET. We are not autonomous and we cannot make any decision even if we find that the qualities are not reaching the standards there is absolutely nothing we can do. We have to go to the Director and say they are flouting the regulations or they are not doing what we expect, but we cannot close the institutions and even with the problems there are some delays sometimes and there are some negotiations with the extension of programmes and if you like because we are under one department I am bound to understand the problems of the programme developers, they expect me to appreciate their problems and say I will extend based on the current situation. So it becomes very difficult for us sometimes, but quite often. Yes we agree.</p>
<p>So major change would be separate yourselves from DVET. Would being in a Parastatal be helpful?</p>	<p>Yes it would be helpful.</p>
<p>Of course one of the problems in DVET is lack of staff teaching staff because it's all centrally appointed. There have been problems which I understand in validation and revalidation but even taking this time to get the diploma out nearly ten years</p>	<p>It is frustrating, but probably it is due to a lack of manpower, I am not sure, but we can stay for ten years running foundation and certificate levels and yet in some cases, I don't know, in some cases you expect to see some person you expect to see the</p>

<p>does seem to be too long to get a qualification completed. You cannot afford to have gaps and say I am sorry there isn't a programme validated, not in a market situation because no one in the private sectors is going to accept that they cannot take people on your qualification if it has not been validated. It is less of a problem if an institution is not ready to deliver but you can't say that the product is not ready.</p>	<p>programmes being developed so it is as you say people may not see us as serious people because we don't have the programmes. We have students that have completed their programmes but they cannot progress because the next level programme is not available. Even the officers I think it frustrates us, that we don't see us progressing.</p>
<p>If we looked at something like yourselves becoming a Parastatal; You are offering a qualification, then you might also have to develop that qualification by contracting people to do this? One of the problems is that programmes are developed by DTVET and you have no control over their outputs but at the same time you have control over the quality at the end of the time? Now if you are going to be in a market situation you are going to have to pay people to develop qualifications even if you do not have the capacity within QAA so that then you can say well here it is, and these are the standards that we expect and we also have the assessments. So you manage otherwise you may not survive in a competitive market. There was some work on a qualifications framework which they want to put in, but since the private sector has moved in you have got all sorts of other qualifications</p>	
<p>Just one other question then about it, because this question has been coming up in may interviews regarding the amount of practical application in BTEP? Is it about right or?</p> <p>Well of course it would be. BTEP is a technician programme and NCC or the apprenticeship programme is an artisan or craft level. Now craft level is going to be more practically applied. Well technician is as well but you also need to have if you are going to be in a technician position you need to have a greater understanding about fault finding problems etc. In some ways there seems to be a lack of understanding here even from CITF, they think that everything should be competence based but do not understand that outcomes based is almost the same , almost identical. One is normally done in a work environment and the other is in training or off the job situation. Unfortunately 80 to 90% of CITF work is also in training off the job situation. So neither is</p>	<p>I don't know. I don't hear that when I go around what I hear normally is the length of time of some practical units. They have little time. Kids don't have enough time to pick up sufficient experience. I don't hear that much really no.</p> <p>There was a study on TVET where NCC was compared to BTEP and during that study there was a feeling that BTEP is more theoretical than practical as compared to NCC programmes.</p>

competence as judged or assessed in the work situation. Both are off the job.	
That is all I need to ask. Thank you very much indeed. I will send you a summary of the research findings in due course.	

Appendix 3: Student Questionnaire and Raw Data Results

Name of Technical College you are currently attending:										
Name of course/programme and level: (E.g. BTEP foundation etc.)										
Your Surname:										
Your home village or town										
Omang Number:										
Sex (M/F)		Date of birth (E.g. day-month–Year)								
The year and term you commenced your present programme? (E.g. 2010 1 st term)										
What programme/course did you do before your current one?										
Which Primary School did you attend?										
Which Secondary School did you attend?										
What BGCSE examination results did you get? (Please tick grade ✓)		A*	A	B	C	D	E	F	G	U
Mathematics										
English										
Setswana										
Double Science										
Single Science										
Physics										
Biology										
Art										
Geography										
		A*	A	B	C	D	E	F	G	U
History										
English literature										
Design Technology										
Food and Nutrition										
Religion and Moral Ethics										
Social Studies										
Agriculture										
Commerce										
Development Studies										
Others please state?										
Why did you apply to this particular College?										
Why did you apply for this particular course/programme?										
What level of vocational education and training do you wish to achieve?										
Would you have preferred to have gained a place directly at a										

University?	
Would you like the course/programme you are currently engaged on to eventually lead to a degree qualification?	
What career/job are you hoping to get in the future?	
Do you think that the training you are receiving now will give you a better chance of getting a job than going to the University directly?	
Please sign and date to indicate that you have voluntarily completed this questionnaire;	
Signature:	Date:
<p>Many thanks for completing this questionnaire. If you are willing to answer further questions for this research or would like information regarding the research outcome, please would you provide your email address:</p> <p>Email:</p>	

Student Questionnaire Raw data

Gaborone Technical College					
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP in Beauty Therapy	Certificate	25	4	21	32 (3/20)
Q6. Age range from 19 yrs. to 29 yrs.	Average age 22				
Q12. What BGCSE results did you get?	Only 6 (24%) students indicated attending senior secondary schools. Points range from 31 to 67 (Average 44)				
Q13. Why did you apply to this particular college?	<p>8 said, one of the few colleges that offered what I wanted 4 said the College had good facilities and learning 3 said to gain a qualification and job experience Others said;</p> <ul style="list-style-type: none"> • offering technical qualifications • I found it interesting • I had no choice • environment • Just to do something • More practical than theory • learn about beauty and only one which has advertised for new students 				
Q14. Why did you apply for this particular programme	<p>11 said they have a passion for this vocational area 3 said to do the job 2 said to get a degree in my course 2 said to know more about this vocational area Others said;</p> <ul style="list-style-type: none"> • Come to school and learn • I just wanted to know more about beauty and the industry • It has a market <p>1 student gave no response</p>				
Q15. What level of vocational education and training would you like to achieve?	<p>Degree and above: 16 (64.00%) Diploma: 8 (32.00%) Other: Physiotherapist</p>				
Q16. Would you have preferred to have gained a place directly at University?	<p>20 students said yes (80%) 3 students said no (12%) 2 students gave no response</p>				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	25 (100%) of students said yes				
Q18. What career/job are you hoping to get in the future?	<p>(5) Lecturer/ Instructor/Beauty Therapy/ (2) Beauty Expert/ Beautician (3) Physiotherapist (1) Make-up artist (2) Somatologist (6) Own business/Lecturer/Dem (2) Skin doctor (2) Orthopediatrist (1) Cosmetologist</p>				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	<p>19 students said yes (76%) 5 students said no (20%) 1 students made no response</p>				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP in Travel and Tourism	Certificate	23	6	17	32 (12/20)

Q6. Age range from 19yr to 28yrs (<i>One candidate did not provide age</i>)	Average age 20.6				
Q12. What BGCSE results did you get?	Only 17 (73.91%) students indicated attending Senior Secondary schools. Points range from 31 to 56 (Average 45.2)				
Q13. Why did you apply to this particular college?	7 said, one of the few colleges that offered what I wanted 2 said College had good facilities and learning environment 2 said desperateness 2 said, I had no choice 2 said near my house or where I stay Others said; <ul style="list-style-type: none"> • A college which was close to my relatives • I want a qualification in education • I wanted to gain knowledge • No school to go to • I was looking for a school • I liked the tourism industry • Because it has hostel accommodation • Offering technical qualifications 				
Q14. Why did you apply for this particular programme	9 said, I have a passion for this vocational area to do the job 2 said they were desperate Others said; <ul style="list-style-type: none"> • to know more about this vocational area • I was willing to attend this college • I want a qualification in education • I wanted to gain knowledge • It was the only college at that moment • I was looking for school • It provides excellent learning/education • Because it is the second largest industry which bring foreign income to our country • I would like to become a travel agent • A good course and did some of this at school • I want to be a tour operator 				
Q15. What level of vocational education and training would you like to achieve?	Degree and above: 17 (77.27%) Diploma: 5 (22.7%) Other: 1 (no response)				
Q16. Would you have preferred to have gained a place directly at University?	19 students said yes (86.3%) 3 students said no (13.64%) 1 student made no response				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	22 (95.65%) of students said yes 1 students (4.35) said no				
Q18. What career/job are you hoping to get in the future?	19 Tour operator 1 receptionist 1 Start my own business 1 Tourism Manager 1 Accounting Technician				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	17 students said yes (73.91%) 6 students said no (26.09%)				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP in Electrical and Mechanical Engineering	Advanced Certificate	10	4	6	10 (4/6)
Q6. Age range from 22yrs to 27yrs		Average age: 23.7			

Q12. What BGCSE results did you get?	Only 6 (60%) students indicated attending a senior secondary school. Points range from 31 to 49 (Average 4.5)				
Q13. Why did you apply to this particular college?	The only college offering this level				
Q14. Why did you apply for this particular programme?	Progression from Certificate level				
Q15. What level of vocational education and training would you like to achieve?	Degree and above: 10 (100%)				
Q16. Would you have preferred to have gained a place directly at University?	7 students said yes (70%) 3 students said no (30%)				
Q17 Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	10 students said yes (100%)				
Q18 What career/job are you hoping to get in the future?	7 students said an Engineer 1 student said a Technician 2 students gave no response				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	10 students said yes (100%)				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP in Building Construction	Certificate	12	8	4	13 (9/4)
Q6. Age range from 19 yrs. to 31yrs 1 student did not respond.	Average age 22.09yrs				
Q12. What BGCSE results did you get?	Only 3 (25%) students indicated attending Senior Secondary school. Points range from 41 to 45 (Average 42.33)				
Q13. Why did you apply to this particular college?	3 said it was the only college still admitting students I 2 said free accommodation 5 said they wanted to do a course in construction 2 said it had one of the best colleges in Botswana 1 said it was next to my home village				
Q14. Why did you apply for this particular programme?	A range of answers are given; <ul style="list-style-type: none"> I wanted to do construction To back up the qualifications that I already have Wanted to be a construction engineer I have a passion for this vocational area It comprises all building courses It was better compared to the others that were advertised Because it can lead me to what I want, an architect it is the career or job I want better compared with other ones which were advertised You can make you own company on finishing To improve the development of our country I want to be an inspector 				
Q15. What level of vocational education and training would you like to achieve?	Degree and above: 11 (91.67%) Diploma: 1 (8.33%)				
Q16. Would you have preferred to have gained a place directly at University?	8 students said yes (67%) 4 students said no (33.33%)				
Q17 Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	All students would like this (100%)				
Q18 What career/job are you hoping to get in the future?	Construction Engineer 5 said quantity surveyor 3 said architect 1 said an engineer 1 said to start my own business 1 said an Inspector				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	8 students said yes (66.67%) 2 students said no (16.67%) 2 students said they were unsure (16.67%)				
Qualification:	Level	Student No's	Male	Female	College

					Stat numbers
BTEP Multimedia	Certificate	20	12	8	30 (19/11)
Q6. Age range from 21yrs to 28yrs 2 students did not respond	Average age 24.2yrs				
Q12. What BGCSE results did you get?	Only 7 (35%) students indicated attending Senior Secondary schools. Points range 33 – 49 (average 40.71)				
Q13. Why did you apply to this particular college?	A variety of responses given; <ul style="list-style-type: none"> • 2 said college had good facilities and learning more practical than Theory • because it is one of the best colleges in the country • one of the few colleges that offered what I wanted • I wanted to continue my studies • environment • Near to home • I wanted to study • Its delivery, equipment and location • because it was a course working with computers • to do multimedia • For the love and passion for multimedia • because of good achievement and its environment • I want to pursue career in multimedia • I have an interest in multimedia • it offered the course I wanted to do • I was interested with the course offered in this college • To continue in my studies • only college around my place 				
Q14. Why did you apply for this particular programme?	A variety of responses were given; <ul style="list-style-type: none"> • I have a passion for this vocational area • I am in love with computerized motion pictures and other illustrations • I felt that it is interesting and I would really enjoy studying • challenging and marketable as most people don't know how to edit photo's graphic design • Reputation, strong delivery, resources and training environment conducive to tertiary training • I wanted to know what multimedia was about and have a passion for computers • enjoy working with computers • To enhance my little knowledge and curiosity about animation and graphics • Interested in knowing media techniques • design and photography • to learn and gain skills and achieve better qualifications 				
Q15. What level of vocational education and training would you like to achieve?	Degree and above: 30% Diploma: (60%) Certificate: 1 1 student said all the levels I am attending 1 student did not respond				
Q16. Would you have preferred to have gained a place directly at University?	60% students said yes 30% students said no 2 students did not respond				
Q17 Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	All students would like this (100%)				
Q18 What career/job are you hoping to get in the future?	A variety of responses were given; <ul style="list-style-type: none"> • Animator • Screen and video editor with some sound engineering • Video editor • Web designer/graphic designer or animator • Web designer/graphic designer or animator • BTV employee 				

	<ul style="list-style-type: none"> • An animator • Lecturer • Web design and photography • self employed • Graphic designer 				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	17 students said yes (89.47%) 2 students said no (10.53%)				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP Information Communication Technology	Advanced Certificate	12	7	5	16 (10/6)
Q6. Age range from 22yrs to 28yrs 2 students did not respond	Average age 24.1yrs				
Q12. What BGCSE results did you get?	Only 6 (50%) students indicated attending recognisable Senior Secondary Schools. Points range from 31 to 57 (Average 41.17)				
Q13. Why did you apply to this particular college?	A variety of responses were given; <ul style="list-style-type: none"> • I was doing nothing • To do practical activities • Think it is the best college • Offered the course I wanted • one of the few colleges that offered what I wanted • Its good • Near home village • To advance my education • Best college • To study multimedia • Not enough points for University • To further my studies • It provided the advanced certificate level 				
Q14. Why did you apply for this particular programme?	A variety of response were given; <ul style="list-style-type: none"> • Looking for a future • To gain more experience • To achieve my goal • equips me for the skill I need • I have a passion for this vocational area • I want to specialise • It's a marketable course • Further my studies • I have a passion for this vocational area • To be an ICT specialist • I have a passion for this vocational area • Learnt more than I thought through BTEP 				
Q15. What level of vocational education and training would you like to achieve?	Degree and above: 66.67% Diploma: 33.33%				
Q16. Would you have preferred to have gained a place directly at University?	58.33% students said yes 41.67% students said no (1 student said, at first yes but after doing BTEP I realise we learn better and become the best in both theory and practical compared to university students.)				
Q17 Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	All students would like this (100%)				
Q18 What career/job are you hoping to get in the future?	A variety of responses give; <ul style="list-style-type: none"> • 10 students said a network administrator • Computer technician • ICT post • Security Analysis • Network Technician 				

Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	10 students said yes 1 student was unsure. 1 student said, being a BTEP student we are underestimated and it is going to be hard if given some job with University students to prove we are much better than them.				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
National Craft Certificate Electrical Installation	Year 2	5	5	0	16 (14/2)
Q6. Age range from 21yrs to 43yrs.	Average age 29.25 1 students did not respond				
Q12. What BGCSE results did you get?	Only 4 (80%) students indicated attending Senior Secondary schools. Points range from 37 to 50 (Average 42)				
Q13. Why did you apply to this particular college?	A variety of responses were given; <ul style="list-style-type: none"> To do electrical installation To upgrade my previous skills Because I work in the surrounding areas Near my home village Facilities are not bad compared with other colleges 				
Q14. Why did you apply for this particular programme?	A variety of responses were given; <ul style="list-style-type: none"> to do the job To upgrade my previous skills I want to be an artisan to increase the number of artisans in the country Because I like it, besides there are no artisans in Botswana so I want to do something for my country 				
Q15. What level of vocational education and training would you like to achieve?	1 students stated a Doctorate 1 student the NCC 1 student the NCC then Diploma 1 student gave no response				
Q16. Would you have preferred to have gained a place directly at University?	1 student stated yes 2 students stated no 2 students did not respond				
Q17 Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	4 stated yes 1 gave no response				
Q18 What career/job are you hoping to get in the future?	3 said Electrician 1 said an Engineer 1 said work in a mine or own business				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	4 stated yes 1 gave no response				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
National Craft Certificate Plumbing and Pipe fitting	Year 3	7	4	3	15 (11/4)
Q6. Age range from 21yrs to 38 yrs.	Average age 28.14				
Q12. What BGCSE results did you get?	Only 2 (28.57%) students indicated attending Senior Secondary school. Neither provided any BGCSE results				
Q13. Why did you apply to this particular college?	2 students said because it is close to home The other students made no comment				
Q14. Why did you apply for this particular programme?	The students made a range of responses; <ul style="list-style-type: none"> It is my career and I want to learn more because it is easy and is marketable To upgrade my knowledge in PPF because it has more market rather than others because it is marketable 				

	<ul style="list-style-type: none">• to obtain NCC• to obtain NCC				
Q15. What level of vocational education and training would you like to achieve?	4 said a degree or higher 2 said a Diploma 1 said an engineer				
Q16. Would you have preferred to have gained a place directly at University?	2 said yes (50%) 2 said no (50%) 2 gave no response				
Q17Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	All the students said yes (100%)				
Q18 What career/job are you hoping to get in the future?	4 stated an engineer 2 stated a plumbing artisan 1 student gave no response				
Q19 Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	All thought that this was the case (100%)				
Jwaneng Technical College					
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP in Business	Foundation	14	2	12	16 (6/10)
Q6. Age range from 18 to 28	Average age 22.36				
Q12. What BGCSE results did you get?	Only 1(7.14%) student indicated attending Senior Secondary school. 32 points were scored.				
Q13. Why did you apply to this particular college?	3 said High teaching quality 2 said Closer to my parents 1 just said Yes 2 said I found it interesting 1 said because of accommodation 1 said to see what was on offer 1 said I do not qualify for other colleges 2 said to learn skills to start my own business of finding a job				
Q14. Why did you apply for this particular programme?	5 said to run a business 1 said I wanted to do business 2 said market for job opportunities in business 1 said to know more about this vocational area 1 said; No space in other courses 1 said because I like it 1 said to see what it offers 1 said, I like business 1 said to acquire necessary skills				
Q15. What level of vocational education and training would you like to achieve?	(12) 85% said a degree (2) 14.3% said a diploma				
Q16. Would you have preferred to have gained a place directly at University?	(11) 91% said yes Only one said no Two gave no response				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	(14) 100%				
Q18. What career/job are you hoping to get in the future?	1 said to run a mortuary 8 said to be a manager 2 said to be an entrepreneur 2 said to run my own business 1 said to open up a cinema 1 said to be a Lecturer				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	(11) 79% said yes (2) 21% said no				
Qualification:	Level	Student No's	Male	Female	College Stat

					numbers
BTEP Electrical and Mechanical Engineering	Foundation	14	13	1	16(14/2)
Q6. Age range from 19yrs to 24yrs	Average age 21.1				
Q12. What BGCSE results did you get?	Only 4 (28.57%) students indicated attending Senior Secondary school. Points range 11 to 25 (Average 18.25)				
Q13. Why did you apply to this particular college?	1 said, I like this college 1 said, I need school 1 said living in Jwaneng 1 said because he wanted to be an engineer 1 said nearest to my village 1 said I have accommodation in Jwaneng 1 said I did not high enough grades for University 2 said to be an engineer 1 said, because I like it 1 said from inspiration of my brother 1 said I prefer this college 1 said I could not get into other colleges 1 said to improve my level				
Q14. Why did you apply for this particular programme?	3 said, I like it 1 said working in a mine 1 said interested 1 said to know more about this vocational area 2 said to be a professional engineer 1 said to mechanical technical 1 said a degree in my course 1 said to fulfil my dreams 1 said from inspiration of my brother 1 said easy to pass 1 said to maintain plant				
Q15. What level of vocational education and training would you like to achieve?	(7) Degree 50% (5) Diploma 36.8% Certificate 7.1% Merit 7.1%				
Q16. Would you have preferred to have gained a place directly at University?	(13) 75% would have preferred this 25% would not 1 person did not respond				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	(14) 100% said yes 1 person did not respond				
Q18. What career/job are you hoping to get in the future?	9 said Engineer (2 in Mining) 1 said manager in mine 2 said fitter mechanic 1 said a machinist 1 did not respond				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	(8) 61.54% said yes 38.46% said no 1 person said it was too early to tell				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
BTEP Clothing Design and Textiles	Certificate	12	2	10	14(2/14)
Q6. Age range from 19yrs to 27yrs	Average age 23.17				
Q12. What BGCSE results did you get?	Only 4 (33.33%) students indicated attending Senior Secondary schools. Points range 24 – 49 (Average 36.75)				
Q13. Why did you apply to this particular college?	3 said, close to home 2 said I like the College 1 said to gain progression 1 said because it is in a mining town 1 said could not access my local college 1 said to become an international designer 1 said no other option 1 said not doing anything				

	1 said less competition than GTC				
Q14. Why did you apply for this particular programme?	1 said, to explore more fashion 4 wanted to be fashion designers 2 said, they love fashion 1 said I have a passion for fashion 2 people wanted to have their own business 1 person was board sitting at home				
Q15. What level of vocational education and training would you like to achieve?	(8) 66.67% wanted to achieve a degree or above 33.33% wanted to achieve a diploma				
Q16. Would you have preferred to have gained a place directly at University?	(11) 92% said yes only one person said no				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	(14)100%				
Q18. What career/job are you hoping to get in the future?	3 said, run my own business Lecturer 5 said Fashion Designer 1 said a Fashion marketer 1 said a Lecturer 1 said a Fashion editor in a magazine				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	1 said, I don't know 4 said, yes 4 said no 1 said No, not enough practical 1 said no less chance of a job than University students 1 said it will get me the chance to go to University				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
NCC Secretarial Studies	Certificate	15	6	9	16(6/10)
Q6. Age range from 18yrs to 30 yrs.	Average age 22.93				
Q12. What BGCSE results did you get?	Only 8 (53.33%) students indicated attending Senior Secondary schools. Points range from 31 to 64 (Average 44.4)				
Q13. Why did you apply to this particular college?	There were a range of Reponses as shown <ul style="list-style-type: none"> To become an entrepreneur To school space availability where I stay Offers marketable courses Close to home because I like it Experience life outside Gabs Something to do I like it in Jwaneng get better opportunities for work Only college offering this course Produces good results 2 students gave no response				
Q14. Why did you apply for this particular programme?	2 said to learn about the business sector 3 said that business programmes are marketable 2 said it will be more easy to find a job 1 said it provides opportunities 1 said to gain a certificate 2 said to be a secretary 1 said to work in an office 2 said to meet goals 1 said to become a permanent Secretary				
Q15. What level of vocational education and training would you like to achieve?	(3) 25% said degree or higher 53% said diploma 1 person said marketing skills				

	2 said certificate level 2 made no comment				
Q16. Would you have preferred to have gained a place directly at University?	(11) 78.6% said yes 21.4% said no 1 made no comment				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	(14) 93.33% said yes 6.67% said no				
Q18. What career/job are you hoping to get in the future?	1 said, Industrial Psychologist 5 said Permanent Secretary 1 said a Business manager 1 said HR manager Typist 2 4 said a secretary 1 said Clerical job 1 said a receptionist 1 said a teacher				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	93.33% said yes 6.67% said no				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
NCC Accounting and Business	Certificate	10	2	8	16(6/10)
Q6. Age range from 20yrs to 23yrs	Average age 20.8				
Q12. What BGCSE results did you get?	8 (80%) students indicated attending Senior Secondary school. Points range between 36 and 55 (Average 44.5)				
Q13. Why did you apply to this particular college?	4 said college near their home 1 said because I need accounting skills for my business 1 said to study foundation before next level 1 said for the accommodation 1 said to study accountancy 1 said to gain entry to Botswana Accountancy College 1 said course I am interested in business				
Q14. Why did you apply for this particular programme?	3 said to be an accountant 2 said to gain accounting skills 1 said to start my own business 1 said to accomplish my career 1 said in line with other course I have done 1 said to know more about business				
Q15. What level of vocational education and training would you like to achieve?	2 made no response 3 said to achieve a certificate 1 said advanced Certificate 4 said degree or higher				
Q16. Would you have preferred to have gained a place directly at University?	(8) 66.67% said yes 33.33% said no				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	(10)100%				
Q18. What career/job are you hoping to get in the future?	9 said Accountant 1 said Administrator				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	(6) 66.67% said yes 33.33% said no				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
NCC Electrical Engineering	Year 2	4	4	0	15(13/2)
Q6. Age range from 23yrs to 29yrs	Average age 25				
Q12. What BGCSE results did you get?	3 (75%) students indicated attending a Senior Secondary school. Points range from 46 to 50 (Average 47.7)				
Q13. Why did you apply to this	3 said they were posted to the college				

particular college?	1 said he loved the college				
Q14. Why did you apply for this particular programme?	1 said progression 1 said, I have a passion for this vocational area 1 said to achieve 1 said, I like challenging jobs				
Q15. What level of vocational education and training would you like to achieve?	2 said degree 1 said NCC 1 said engineering				
Q16. Would you have preferred to have gained a place directly at University?	100%				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	100%				
Q18. What career/job are you hoping to get in the future?	1 person already employed currently working 1 an electrical artisan working in a mine 1 an Engineer 1 an Artisan				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	100% said yes				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
NCC Bricklaying and Plastering	Year 3	11	9	2	12(11/1)
Q6. Age range from 22yrs to 27yrs	Average age 24.5				
Q12. What BGCSE results did you get?	Only 1(9.09%) student indicated attending Senior Secondary school. Points scored were 32				
Q13. Why did you apply to this particular college?	5 said to complete studies 3 said to have a future 1 said because JTC provides better education 1 said to learn Bricklaying 1 said to gain skills				
Q14. Why did you apply for this particular programme?	2 said to know more about this vocational area 3 said to become skilled 1 said I like it 1 said to get a better education 1 said to get experience 1 said I like drawing plans 2 said to get more experience				
Q15. What level of vocational education and training would you like to achieve?	36.36% said a degree 18.18% said a diploma 45.45% said NCC				
Q16. Would you have preferred to have gained a place directly at University?	90.91% said yes Only one student said no				
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	90.91% said yes One student gave no response				
Q18. What career/job are you hoping to get in the future?	6 said an engineer 3 said an architect 1 said a foreman 1 said a Lecturer				
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	81.82% said no 18.18% said yes				
Qualification:	Level	Student No's	Male	Female	College Stat numbers
NCC Painting and Decorating	Year 1	12	4	8	12(4/8)
Q6. Age range from 18yrs to 27yrs	Average age 22.54				
Q12. What BGCSE results did you	Only 5 (41.67%) students indicated attending Senior Secondary				

get?	school. Range from 19 to 36(Average 23.6)
Q13. Why did you apply to this particular college?	<p>2 said I like Jwaneng Technical College or a good college</p> <p>2 said to complete the course</p> <p>1 said I had a lot of information about it</p> <p>1 said to gain NCC</p> <p>1 said, one of the few colleges that offered what I wanted</p> <p>2 said to progress or to improve</p> <p>1 said near to college</p> <p>Offering technical qualifications</p>
Q14. Why did you apply for this particular programme?	<p>2 said I like painting</p> <p>to reach a higher level of education</p> <p>To get a job</p> <p>To be a civil engineer</p> <p>Increased number professional qualified painters in Botswana</p> <p>I like it</p> <p>Interior decorating</p> <p>I have a passion for this vocational area</p> <p>I want to know how to paint and decorate</p> <p>Inspiring</p> <p>To learn practical work</p>
Q15. What level of vocational education and training would you like to achieve?	<p>58.33% said a degree</p> <p>1 said a high level</p> <p>1 student said the NCC</p> <p>1 said a technician</p> <p>1 said Diploma</p> <p>1 said an Interior designer</p>
Q16. Would you have preferred to have gained a place directly at University?	<p>100% said yes</p> <p>1 student made no comment</p>
Q17. Would you like the course/programme you are currently engaged in to eventually lead to a degree qualification?	<p>100% said yes</p> <p>2 students gave no reply</p>
Q18. What career/job are you hoping to get in the future?	<p>6 said Civil Engineer</p> <p>2 said Quantity surveyor</p> <p>1 said a Facilitator</p> <p>1 said a Lecturer</p> <p>1 said a Technician</p> <p>1 said Interior design or dress designer</p>
Q19. Do you think that the training you are receiving now will give you a better chance of getting a job than going directly to University?	<p>50% said yes</p> <p>Other comments were;</p> <ul style="list-style-type: none"> • no best to do a degree in P&D • Going to University would be good • no all need to go to University • No • Going to University • Maybe University has a better quality standard of education, but getting a job is an opportunity

Appendix 4: Botswana Student Statistics

Calculations

BOTSWANA TECHNICAL COLLEGE UTILISATION (DVET 2001)

Introduction

Prior to 2000 data collected from Technical Colleges and Brigades amounted to the total student numbers attending by vocational area, male and female splits and teaching staff by department. Additionally student examination/achievement results and graduations, which are an important part of management information, are also reported. Little attention had been given to monitor trends except student numbers. Examination results were reviewed on an annual basis but again no attempt had been made to examine trends except to comment on the previous year's results.

However until 2000 nearly all students attending Technical Colleges were National Craft Certificate (NCC) students and evening class students. NCC is the theoretical component of the apprenticeship scheme and NCC students therefore only attended college for one term per year or approximately 13 weeks annually (except one year when four terms were tried).

As the NCC takes four years to complete each college term enabled either 1st 2nd 3rd or 4th year students to attend across a range of vocational areas. The resultant student attendance statistic was therefore Term 1 + Term 2 + Term 3 = Total students (Note that these students were only 1/3 of a full time student). Evening class students might attend for varying time periods each term sometimes for just one term but sometimes attending throughout the year. Thus the total student numbers could never be an accurate representation of what was happening as student attendance varied.

Under the past statistical system all that could be deduced was that 'X' number of students were accessing technical education in colleges and Brigades and in some cases these students were being double/triple counted as they were attending for more than one term. There were instances when student numbers were extremely low yet staff teaching commitment contact with students was very high.

It is clear that there was a need for a review of the purpose and methodology of gathering and collating student statistical information so that future data might be more accurate and reflect what is really happening in technical colleges and eventually Brigades. This would enable better management and future planning.

The untrained eye does not always spot this from current student statistics but if a Student Staff Ratio (SSR) were calculated for colleges and departments, they and the MOE/DVET would have a much clearer understanding of the efficiency and cost of delivery.

The proposed data will enable the ability to track input and output from programs, which will show a range of data which contribute to the effectiveness and efficiency of education and training in colleges. Here we just will look at two new indicators:

1. Student Staff Ratio
2. Cost per student trained.

1. Student Staff Ratio (SSR)

The calculation of the SSR in primary or secondary schools is relatively easy as you simply take the total number of pupils and divide this number by the total number of teaching staff. This is because all the students are full time and generally all the teachers are full time and teaching generally the same number of hours.

Therefore if we have 100 students and 10 teachers $100/10 = 10:1$ that is ten student for each teacher.

However in Technical Colleges large numbers of students only attend for one term or with part time evening students they may only attend the college for as little as two hours a week. This requires more calculation to turn all students in to full time equivalents.

Teaching staff in Technical Colleges are also on different grades of Lecturer 1, Lecturer 2, Lecturer 3 and so forth and the amount of teaching commitment varies according to the grade. Additionally colleges often employ part time teachers to teach evening only students and these also need converting into full time equivalent teachers before the SSR can be calculated.

What is a full time student?

- **No student shall be regarded as pursuing a full time programme unless he/she attends for at least 21 hours taught contact per week for 40 weeks per year (840 hours per annum).**
- **Students who exceed the 21 hours per week will still only be counted as 1 FTES.**
- **Students attending less than 21 hours per week would be classified as part time.**
- **Total part time student hours may be multiplied up to establish the Full Time Equivalent (FTE).**

What is a full time teacher? This could be worked out in detail by calculating the total number of teaching hours available and the dividing it by the number of teachers. From a survey this year the results in an average teacher having 18 hours of contact a week for 40 weeks in the academic year. Note: If the number of higher grade lecturers increase in an institution then it is very likely that this 18 hours could become much lower.

An average full time teacher is a one who teaches 18 hours per week for 40 weeks = 720 hours per year.

Note: The Principal and Deputy Principal(s) are not included in teaching staff numbers at the Technical Colleges.

A Spread sheet is provided for each institution and if the data is entered correctly then the SSR will be automatically generated. These will be checked each term from an audit visit and the results discussed with the management team to agree action plans for improvement.

Remember: It is important that part time student numbers are calculated as a proportion of a full time student and full time teaching staff will be averaged out

at contributing 18 hours per week for 40 weeks. The part time staff hours must be calculated as a proportion of the full time hours.

The SSR for each individual course can be calculated but vary depending on delivery as some require a lower SSR due to safety regulations or limited resources such that it is easier for each institution to establish an overall SSR. In this way some course may have a much higher SSR which will compensate for the lower SSR on others. The Director of DTVET has set a target of 10:1 for each Technical College as something that each management team can aim to achieve.

Examples:

Often apprenticeship NCC groups where theory teaching is taking place operate at more than 16 i.e. 20-25. However BTEP are normally run at 16 per group.

In hospitality at Gaborone T.C. due to the limited resources they divide a group of 16 into two groups of 8 students for much of the practical work, which would then result in a much lower SSR.

The way to increase SSR's is to ensure that maximum students are recruited and retained by the institution (If a target of 16 students is required then 18 should be recruited).

Constraints to achieving high SSR's are the quality of delivery, which could be reduced if large numbers are taught at a time.

However we should be aware that in primary education often the SSR is 25:1 and above and the curriculum is also differentiated and outcomes based. In Technical Colleges, room size and skills based training require, due to H&S implications, a much lower base not exceeding 16:1 unless technician and resource support is available.

Ways to increase SSR:

- Larger class sizes.
- Employing technicians for support in practical.
- Reducing administrative remission hours.
- Reducing staff development secondments. (or place at more appropriate times.)
- Increasing the teaching weeks in the year.
- Averaging staff contact hours over the teaching year.
- Abating selected staff hours.
- Discontinuing or rationalizing under subscribed courses.
- Reducing FT staff and increasing FTPT lecturers. This would not be so appropriate here as there is already a high FTPT lecturer percentage in some colleges.
- Reducing the number of senior posts. (Promotion always reduces student contact hours)
- Reduce contact hours through self-study, resource based learning. (Currently we have contact hours of 30 for the apprenticeship NCC and

25/28 for the BTEP. In most cases BTEP runs on 28 hours per week. Certainly steps should be taken to where possible to reduce the BTEP to the 25 hours proposed or less.)

Constraints

- Limited class sizes in workshops
- Restricted resources in laboratories
- Limited size of some class rooms
- Size of government furniture sometimes limits occupancy.
- Prescriptive examination dates.
- Prescriptive course development.
- Falling enrollment in specific areas. (The apprenticeship NCC needs reviewing and perhaps rationalizing certain provision to run at only one or two centers in the future.)
- Necessary servicing by other departments.

SSR's as a planning instrument enable decisions to be made on:

- Class sizes and which group can be split.
- Special cases and options where local needs can be met.
- Additional study hours, tutorials and remission.

Importance of staff Awareness

- Explain why SSR is important, benefits to staff
- Explain how it is calculated
- Explain why large classes do not necessarily produce a large personal SSR
- Explain the effect of remission hours on SSR
- Explain to Senior Lecturers that they enjoy built in remission for management duties over and above teaching preparation and assessment.
- Calculate individual SSRs

2. Cost per student

SSR's are only related to academic/teaching cost and take no account of the non-teaching posts, or the costs in operating an institution. To calculate the actual cost per student requires the total running costs of the institution to be divided by the student full time equivalent. Even the DTVET overhead costs need to be included in any calculation which can be proportioned.

As an example of SSR's a table has been prepared to show what student staff ratios occurred in 2003 in all the institutions. This is assuming for term 2 that 1 full time student attends for more than 21 hours per week for 13 weeks. (1 x 21 x 13 = 273 hours one FT)